



clean & green

just do it

Act now to cut emissions, city fleet manager tells conference

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Bulky tanks for compressed natural gas consume room on a chassis, but there's usually room for them on trash collection trucks. Here the tanks are stacked vertically ahead of the packer body.

Government people tend to spend a lot of time thinking and planning when they should just get things done, contends David McCary, director of solid waste management for the City of San Antonio. That's why the Texas municipality's managers and elected officials have stopped studying what to do about vehicle-generated air pollution and have begun converting their trash trucks to burn natural gas.

"Government has a responsibility

to lead by example and create a sustainable city," McCary told an audience during the Alternative Fuel Vehicle Institute's recent annual conference. "We get to make policy, and we should follow it" without undue delay. San Antonio, with a population of 1.34 million and 344,000 homes and businesses, needs cleaner air, and cleansing the exhaust of trash collection trucks is one way to do it.

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Tom Berg • Senior Editor

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can buy before 2010” so they can beat higher purchase prices, he said. “That’s not the answer.”

The answer, he said, is to operate even cleaner-burning engines that are now available. They cost a lot more than diesel, but state and federal grant money is available.

Choosing CNG

McCary, who has managed fleets in other cities in the U.S., said he concluded that compressed natural gas was the best way to tackle the problem. The gas burns cleanly, and it’s readily available in Texas, which financially encourages its use. Also, CNG stations are far less costly to buy and install than cryogenic liquified stations, which meant a system could be put into operation faster. He convinced members of the city council to go along with a 10-year action plan.

Helping to get the CNG program moving was San Antonio’s political system, in which city council members serve two-year terms. That means they must quickly fulfill any promises they made during campaigning or they won’t be re-elected, McCary explained. Clean air has been a political issue.

“While others were meeting and planning, we took action,” he boasted. With the help of \$1 million in grant money, the city opened its first CNG fueling station in July 2008 and began acquiring gas-burning trucks. It hopes to have 30 trucks running by the end of this year.

The gas-fueled trucks are proving less costly to operate than diesel. Because gas is subsidized, the city is saving 15 cents per equivalent-gallon of diesel. The city will encourage private haulers to switch to natural gas by offering discounted permits.

“You don’t have time to sit still any longer,” McCary told attendees at the conference in Orlando. “We have to act now... There are many vendors

out there. All you have to do is raise your hand,” and they’ll come forward with information.

AT&T’s story

Another organization acting now is AT&T, which operates 85,000 vehicles. It announced it will spend \$565 million for 15,000 alternative-fuel vehicles over 10 years. Included are \$350 million for 8,000 CNG-fueled service trucks and plans for as many as 40 refueling stations, said Jerome Weber, vice president for fleet operations, another presenter at the alternative fuels meeting.

The new, cleaner trucks will amount to a small percentage of the total fleet, Weber acknowledged, but they’ll contribute to cleaner air. Last year AT&T’s 105 alternative-fuel and hybrid vehicles cut carbon dioxide emissions by 30 percent.

AT&T chose CNG for California, where an infras-

tructure is in place and increasingly strict anti-pollution regulations demand using it. Generally, CNG costs 30 to 40 percent less than unleaded gasoline and also less than liquified natural gas. Most CNG comes from domestic wells and is reliably supplied via pipeline, Weber and other users said.

Experience with CNG will help when hydrogen fuel cells come into use, Weber said, as natural gas is the likely fuel for the cells, which are still under development.

Service life for an AT&T truck is 10 to 12 years, allowing time for return on investment. Higher vehicle purchasing costs are somewhat offset with real paybacks: CNG-powered vehicles get 22 to 30 percent better fuel economy, while new and converted hybrids save 44 to 56 percent in fuel, he said.

No-spray mud flaps enhance economy

A mudflap design originally intended to cut splash and spray is proving to be a very effective fuel economy device.

The Eco-flap from Andersen Flaps is designed to pass air through the flap. The original objective was to let water from tire spray impinge on and drain from the flap, while the air that normally carried the spray out to the sides would flow through the many passages in the flap. But it turns out that by letting the air pass through, the design also offers a lower air resistance when a truck is going down the highway.

Depending on the type of flap installation on a tractor-trailer, this

can amount to savings of at least 3 percent and in some cases considerably more.

The most significant difference can be seen on trailers that have mudflaps attached to the rear underride guard. There the flaps hang directly in the airstream and offer the most resistance. But even flaps mounted close to the tractor drive wheels and the trailer tandem offer significant resistance to the air flow, as evidenced by the way they “sail” as the truck goes down the road. Devices such as flap weights



to prevent this displacement of the flap actually increase the air resistance.

The nylon Eco-flaps cost two to four times more than the cheap, throwaway commodity flaps most fleets specify. However, Andersen claims the flaps have a very short payback because of the fuel savings.



Air passes through the Eco-flaps, top, saving fuel and cutting splash and spray compared to the traditional mudflaps in the bottom photo.

Even at today's fuel price, it can be as short as 30 days. A long list of well-known fleets have been using the flaps and report savings ranging from 0.25 mpg to as much as 0.9 mpg. The latter was a fleet that added ICC bumper-mounted flaps in addition to the regular trailer-tandem flaps.

These fuel economy savings provide a real payback for the flaps while enhancing safety in fulfilling their design purpose of suppressing splash and spray. Video of the flaps shot on rain-soaked highways show a significant reduction in road spray as the water is caught and drains from the flaps. This enhances the driver's view in his mirrors, but also enhances the view for passenger-car drivers as they come up behind and pass a moving truck and trailer.

The flaps are interchangeable with conventional flaps. They are also more rugged than conventional flaps, with one fleet going from a 15 percent flap turnover to a replacement of only two flaps in four months, and this only because they had been pinched against a curb. Eco-flaps are also customizable with a company's name, logo or safety message.

More info: www.ecoflaps.com.

— Steve Sturgess, Executive Editor

Custom sleeper SmartWay-certified

If you thought custom sleepers were all boxy, fuel-guzzling affairs, check out this Freightliner Cascadia Custom Sleeper from Ft. Wayne, Ind.-based Stoops Specialty



Trucks from Stoops Freightliner/Sterling/Western Star. It's just been awarded SmartWay certification by the U.S. Environmental Protection Agency, the only custom sleeper conversion unit to achieve this honor. "We believe that this is the most aerodynamic custom sleeper tractor ever built," says Jeff Jones, SST sales manager.

GOVERNMENT ONE STEP CLOSER TO GREENHOUSE GAS REGULATION

Expect to see some sort of action taken toward federal regulation of greenhouse gas emissions, now that the Environmental Protection Agency has officially said greenhouse gases may endanger public health or welfare.

The EPA's proposed finding, which now moves to a public comment period, identified six greenhouse gases that pose a potential threat – gases that are emitted into the atmosphere by vehicles and many industrial plants.

EPA Administrator Lisa Jackson said the agency could develop regulations under the Clean Air Act to combat greenhouse gases, but the Obama administration would prefer that Congress address the issue through "cap-and-trade" legislation.

Medium- and heavy-duty trucks contribute around 5 percent of the nation's greenhouse gases, and the predominant greenhouse gas emitted from the trucking industry is carbon dioxide. Exactly how greenhouse gas regulation might affect the trucking industry is at this point unclear.

The American Trucking Associations earlier this year asked Congress to address the issue through actions such as enacting a national 65-mph speed limit and governing truck speeds; increasing funding for the EPA's SmartWay voluntary greenhouse gas reduction program; national fuel economy standards for medium- and heavy-duty trucks; financial incentives to increase the adoption of idling reduction technologies; and promoting the use of "more productive truck combinations" to result in fewer truck miles traveled.

More info:

<http://epa.gov/climatechange/endangerment.html>

President Obama last month announced steps to increase the use of biofuels – but the use of traditional soy-based biodiesel to do that would be limited in an EPA proposal.

Obama signed a presidential directive establishing a Biofuels Interagency Working Group, announced

renewable fuel mandate can be met with conventional biofuels, including corn-based ethanol and soy-based biodiesel.

For the first time, the proposal would require some renewable fuels to achieve greenhouse gas emission reductions compared to the gasoline and diesel fuels they are replacing.

“It appears that the EPA, in determining the greenhouse gas profile

for biodiesel, is penalizing the U.S. biodiesel industry for land use decisions made outside the U.S. that have little if anything to do with the domestic biodiesel production,” said Manning Feraci, vice president of federal affairs for the National Biodiesel Board. He warned that by limiting the use of traditional biofuels, the rule would make it nearly impossible to meet the law’s goals.

Meanwhile, Minnesota became the first state to require that diesel fuel contain a 5 percent blend of biodiesel.

Minnesota was also the first state to require that diesel sold in the state contain biodiesel, at 2 percent in 2005. There were initially concerns about cold-weather performance and quality issues, but supporters say those issues have been addressed.

Washington, Oregon, Pennsylvania, Louisiana, New Mexico and Massachusetts have also passed biodiesel requirements.

material delivery application.

Pennington Gas Service delivers propane primarily to residential customers in Michigan, Ohio and Indiana. The company anticipates reducing fuel usage and emissions by up to 30 percent.

“The ability to turn off the diesel engine and use the hybrid system while pumping propane to our customers is ideal,” said company partner Keith Pennington. “Not only does it make economical and environmental sense, but a quiet, zero-emissions pumping operation is safer for the residential neighborhoods where we do the majority of our business.”

OBAMA ADMINISTRATION ANNOUNCES BIOFUELS INITIATIVES

additional Recovery Act funds for renewable fuel projects, and announced the Environmental Protection Agency’s Notice of a Proposed Rulemaking on the Renewable Fuel Standard.

The NPRM outlines the EPA’s strategy for increasing the supply of renewable fuels. The goal is to reach 36 billion gallons by 2022, as mandated by the Energy Independence and Security Act of 2007.

EISA will establish four categories of renewable fuels:

- cellulosic biofuels;
- biomass-based diesel;
- advanced biofuels; and
- total renewable fuel.

In 2022, the proposal would require 36 billion gallons annually of renewable fuels. Of that, 16 billion gallons must be cellulosic biofuels, and 1 billion gallons must be biomass-based diesel.

At most, 15 billion gallons of the

C.H. ROBINSON, CASCADE SIERRA TEAM UP TO CUT EMISSIONS

Con-profit organization Cascade Sierra Solutions announced they will work together to help motor carriers reduce fuel consumption and carbon emissions.

CSS identifies, promotes, and finances the use of clean technology to reduce fuel consumption and air pollution from heavy-duty diesel engines. According to Sharon Banks, CSS CEO, a full retrofit of energy-saving devices potentially could save 20 percent on a trucker’s fuel bill.

C.H. Robinson will provide financial support and will help promote CSS services to its network of more than 45,000 contract motor carriers in North America.

CARB APPROVES \$42 MILLION IN GRANTS

The California Air Resources Board approved \$42 million in AB 118 Air Quality Improvement Program projects that will accelerate the commercialization of clean engine technologies.

Beginning this fall, Californians will be able to use these grants toward the purchase of zero-emission or hybrid engine technologies that

GREEN IN BRIEF

FREIGHTLINER DEVELOPS HYBRID HAZMAT TRUCK

Freightliner has built a Business Class M2e Hybrid truck that marks the first application of the Eaton parallel electric hybrid system to a hazardous



they otherwise might not have been able to afford.

All interested Californians can apply for part of \$25 million in funding assistance for hybrid trucks and buses to purchase new commercially available technologies for the 2009-10 fiscal year.

Gov. Arnold Schwarzenegger provided funding for alternative fuels and clean vehicle technologies by signing AB 118 into law in October 2007. In April, the California Energy Commission adopted an investment plan that provides \$176 million over the next two years to fund programs that promote these new technologies.

BLUETEC DEMO UNITS AT SCHNEIDER

Detroit Diesel's first two BlueTec SCR emissions technology customer demo units are being evaluat-

ed by Schneider National. The units are being integrated into Schneider's fleet to gain real-world experience with the technology in advance of EPA 2010 regulations.

Delivered in late January, the Schneider demo units are Freightliner Cascadias equipped with Detroit Diesel DD15 engines. They have already logged more than 45,000 miles.

WASTE COMPANY TESTING MACK SCR, HYBRID

Phoenix-based Republic Services and Mack Trucks have formed a partnership that allows Republic to field-test four pre-production diesel garbage trucks equipped with selective catalytic reduction technology. They also will field test the first American-built Mack Diesel Hybrid garbage truck.

FIRST BULK DEF DISPENSER OPENS

What TravelCenters of America believes is the first operating retail bulk dispenser of diesel exhaust fluid in the U.S. is in place at TA's location in Ann Arbor, Mich.

DEF is needed for most 2010-emissions-compliant diesel engines, some of which are now in test programs at fleets.

The 275-gallon dispenser from Colonial Chemical is housed in TA's heavy truck repair facility. More-accessible outdoor dispensers will later be installed near diesel pumps.

TravelCenters also announced that prepackaged 2.5-gallon containers of DEF have arrived at its LaVergne, Tenn., distribution warehouse. All TA locations and its Road Squad emergency roadside assistance vehicles were expected to have DEF supplies available by early June. n



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Contact Person
Mr. Volker Ott

Phone +1 8 64-6 88-14 31
Fax +1 8 64-6 88-14 01
volker.ott@de.kspg.com



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