

Cleanest garbage trucks in the West **Cutting edge hybrids slash fuel costs, pollution, and noise**

By Dennis Wyatt

Manteca Bulletin, Tuesday, Dec. 18, 2012

Get ready for a 51,000-pound "golf cart" to swish through your neighborhood.

It's not a golf cart per se but a garbage truck with cutting edge hybrid technology that experts say sounds more like a golf zipping along links than the annoying clanking, screeching, and grinding noises that refuse trucks are known to make.

Manteca on Monday rolled out two new garbage trucks equipped with a Parker RunWise Advanced Series Hybrid Drive. They are the first of their kind in California and may also be the first to go into service west of the Rockies.

While they are substantially quieter, that's not what caught the attention of Manteca Public Works personnel who have made a career out of finding innovative ways to reduce day-to-day operating costs. The RunWise system - used on Miami garbage trucks - has delivered fuel savings ranging between 40 and 50 percent over a conventional diesel garbage truck.

Possible \$1.5 million savings over 10 years

That translates into a \$70,000 to \$100,000 fuel savings over the expected 10-year life of a garbage truck. And considering Manteca has 15 garbage trucks rolling on any given work day, that could translate into \$1.5 million in fuel savings in a decade's time based on 2012 prices. If diesel prices climb so do the savings.

And while Manteca could save a garbage truck full of money, that's not what prompted the San Joaquin Valley Air Pollution Control District to underwrite the cost of adding the system to a pair of new trucks with a \$242,500 grant.

Since the trucks will burn up to 50 percent less diesel, a truck equipped with the RunWise system will reduce carbon emissions by 55 tons a year. That's the equivalent of removing nearly 20 mid-sized cars from the road or planting as many as 2,600 trees and letting them grow for 10 years.

Deputy Public Works Director Jim Stone noted that's just as important since the garbage trucks being put into service after the first of the year will operate in residential neighborhoods.

The fact they are significantly quieter is an added bonus.

R.J. Marotta - the Parker sales manager - noted that garbage truck drivers in Miami were stunned to hear how quiet the systems were. They stopped wearing their ear plugs noting that the noise was no more noticeable than that made by a golf cart.

The RunWise system also has another advantage based on the Miami experience. Because they run smoother, truck operators are more efficient. They have been able to increase the number of stops on a route by 10 to 15 percent.

That - when combined with the fuel savings - could very well help Manteca extend its streak for consecutive years of no monthly garbage rate increases well beyond the current five years.

Stone said the trucks will start appearing on Manteca streets for regular route collection early in January. When they do, they will be completely "wrapped" with art work letting the public know how clean the trucks are. It won't be a subtle wrap either. It will include plenty of green grass, flowers, birds, blue skies, and such.

"You'll be able to tell it's the hybrid truck," Stone said.

As part of the deal with the air pollution control district, both the new trucks will have their air pollution and fuel consumption carefully monitored. The same monitoring will be done on the same routes using conventional diesel trucks. The data will provide San Joaquin Valley air quality experts with their own information to determine how well the system works using the state's reformulated diesel and other variations that don't exist in Miami.

The city will also save on the wear and tear on brakes. Conventional refuse trucks need brakes replaced four times a year at a cost that can exceed \$2,000 a pop. The RunWise system is expected to go two or more years before a brake change is needed.

City put first hybrid garbage truck in service back in March of 2011

This isn't the city's first hybrid garbage truck. In March of 2011 Manteca became the first city on the West Coast to roll out a garbage truck with a hydraulic launch assist system that is on target to reduce fuel consumption by up to 30 percent and carbon dioxide emissions by 40 percent over basic diesel trucks. It was so cutting edge that the state Air Resources Board was still piecing together information on the truck when it went into service.

The HLA system works much like a gasoline-electric hybrid. It works by recovering a portion of the energy normally lost as heat when the vehicle's breaks are engaged. Unlike gasoline hybrids such as a Toyota Prius, it doesn't employ a battery pack. Instead the hydraulic system uses pistons to capture the wasted energy by compressing nitrogen gas stored in a tank. When the foot is taken off the pedal the wheels drive a hydraulic pump that sends hydraulic fluid to compress the nitrogen gas to slow the truck down. When the pedal is pushed down, the nitrogen expands to push a piston in a cylinder filled with hydraulic fluid to help the diesel engine turn the rear wheels.

The RunWise accelerates fuel savings and further reduces pollution by integrating mechanical and hydraulic drive elements into a 3-speed transmission to optimize efficiency at all speed ranges. All shifting occurs smoothly and automatically. All speed modes accommodate brake energy receiver allowing stored brake energy to be used to power the vehicle in all modes of transportation

Upon braking, RunWise works seamlessly with the refuse vehicle's standard braking system using hydraulic fluid to decelerate the vehicle. At the same time, it simultaneously transforms and stores the vehicle kinetic energy in lightweight composite accumulators for use when the vehicle starts moving again. The more stops a vehicle makes, the more efficient the system becomes relative to a conventional drive train.

Typical garbage trucks without any hybrid system costs \$300,000. Manteca's entire fleet of 25 trucks ranging from side loaders to rear loaders will eventually be converted to cleaner technology. The city's two new street sweepers already employ hybrid technology.

It is part of the city's ongoing efforts to keep costs down. Twenty years ago, the city was using standard manual collection that allowed a driver to do 350 homes in one day. The city then switched to semi-automated trucks that increased efficiency so one driver could collect from 750 homes a day. Now with the fully automated system a driver can pick up trash at as many as 975 homes per shift.

Air officials do slow burn deciphering pollution rules

By Alex Breitler

Stockton Record, Tuesday, Dec. 18, 2012

On Thursday, San Joaquin Valley air quality officials will vote on a plan to clean up one of our most dangerous forms of pollution.

Then they'll turn around and write the plan all over again.

That's because the Environmental Protection Agency on Friday tightened the standard on which this week's plan is based.

A tortured history

- 1997: The Environmental Protection Agency sets the first PM2.5 standard.
- 2005: The San Joaquin Valley is formally declared a "nonattainment" area for PM2.5.
- 2006: EPA tightens the standard.
- 2008: The San Joaquin Valley Air Pollution Control District finishes a plan to comply with the first standard by 2015.

- Friday: EPA tightens the standard a second time.
- This week: The air district board votes on a plan to comply with the 2006 standard by 2019.

Welcome to the topsy-turvy world of air pollution regulation, in which Valley officials say they can't keep up with constantly changing rules and looming deadlines.

Next week's vote is a "real life example" of the confusion generated by the Clean Air Act, which hasn't been updated since 1990, said Seyed Sadredin, director of the San Joaquin Valley Air Pollution Control District.

He called for changes in the law during a Congressional forum in late November.

"(The law) is very chaotic," Sadredin said last week. "There's a great deal of confusion, redundancy, duplication in terms of the bureaucratic work we have to do. ... And it sets up the public for a sense of failure, a sense that nothing is happening, because every time you meet a standard the goalpost gets moved."

Tiny particles of dust and soot known as PM2.5 are the subject of the plan set for approval next week.

Small as they are, the particles are a multibillion-dollar problem in the Valley - increasing health care costs and contributing to hundreds of premature deaths each year.

The plan up for discussion next week calls for reducing PM2.5 most noticeably by further restricting residential wood burning on stagnant winter days.

But the plan, as written, would merely bring the Valley into compliance with the old standard. We'll need another plan for the new rule announced Friday.

Don't blame the Clean Air Act for this headache, said Paul Cort, an attorney with the environmental group Earthjustice.

The old 2006 standard that the district is only now addressing was inadequate to begin with, he said. If a stricter standard had been enacted then there would be no need for all the confusion.

"This is not about the law," Cort said. "This is about the (Environmental Protection Agency) not following the law" in 2006.

But the air district is not entirely without blame either, Cort said.

He argues that the plan up for adoption this week does only the "bare minimum" to achieve the old standard. The district should plan more ambitiously.

"We may not have known until today what the final standard was going to be, but we knew that it was going to be tightening. We knew it was going to change," Cort said. "(The air district needs) to sort of embrace their public health directive and say, 'You know what? These federal standards we know are not sufficient, so we know we're going to have to do more.' "

While pollution in the Stockton area is not as severe as Fresno or Bakersfield, the entire Valley could be subject to sanctions - such as loss of federal highway funding - if plans to address the problem fail.

How would Sadredin change the law? He said he supports new standards based solely on health science. But deadlines to comply with those standards should be more flexible so that regions can identify affordable and technically feasible solutions.

That's his request of Congress. It remains to be seen if the act will be modified.

"Of course this is the beginning of a long process," Sadredin said, "but I heard a lot of support and I think there's the potential for this to succeed."

wood burning

The most controversial proposal in the Valley's new PM2.5 control plan would increase the number of days in which residents are prohibited from using their fireplaces.

The average number of no-burn days each year in San Joaquin County could increase from 18 to 47, the plan says.

Any tightening of the no-burn rule will have to be voted on at a future board meeting and will not take effect immediately.

Thursday's meeting is scheduled for 9 a.m. in Fresno. A webcast is available at www.valleyair.org.

Merced Council backs Rawling for spot on air board

Three others are in the running

By Joshua Emerson Smith

Merced Sun-Star, Tuesday, Dec. 18, 2012

MERCED -- The Merced Council voted Monday to have Councilwoman Mary-Michal Rawling represent the city for a chance to fill a seat on the San Joaquin Valley Air Quality Control District's governing board.

"Both the candidates are outstanding clean-air advocates, but I'd like to nominate Mary-Michal Rawling," said Councilman Bill Blake. Councilman Josh Pedrozo was also seeking to represent the city on the board.

Only Councilman Mike Murphy voted in opposition to the selection of Michal Rawling.

There's a vacant position on the eight-county regional air board that must be filled by a council person from a city in Merced County.

Also in the running for the post are Atwater Councilman Craig Mooneyham, Gustine Mayor Dennis Brazil and Dos Palos Councilman Johnny Mays.

A valleywide Special City Selection Committee has the responsibility of selecting the members for the San Joaquin Valley Air Pollution Control District governing board. The special committee is made up of council members from more than 50 cities in the district.

The council person who is elected to the regional air board will replace Ceres Mayor Chris Vierra. Board members serve three-year terms with a meeting stipend of \$100.

The 15-person air board is composed of five city council members, with counties rotating between being represented on the board. Two seats are appointed by the governor, who must be a medical professional and an air quality expert.

One supervisor from each of the eight counties in the district hold the remaining seats on the regional air board. Hub Walsh represents Merced County.

The city selection committee is expected to vote in January on the city council member who will represent Merced County.

The air board is responsible for overseeing decisions, policies and regulations regarding air quality issues in the San Joaquin Valley, such as the implementation of restrictions on fireplace use.

NEW SOOT RULING: Critics Blast EPA Over First Post- Election Regulation

Fox 40 News, Saturday, Dec. 15, 2012

The Environmental Protection Agency on Friday issued its first major regulation since the Nov. 6 election, imposing new air quality rules on soot pollution in what critics called evidence of a post-election "regulatory cliff."

The EPA rule reduces by 20 percent the maximum amount of soot released into the air from smokestacks, diesel trucks and other sources of pollution.

EPA Administrator Lisa Jackson said the new standard will save thousands of lives each year and reduce the burden of illness in communities across the country, as people "benefit from the simple fact of being able to breathe cleaner air."

But the new soot standard has been highly anticipated by environmental and business groups, who have battled over whether it will protect public health or cause job losses.

The American Petroleum Institute warned Friday that the new rule "is unnecessary and could drive up costs for new and expanding businesses trying to hire employees."