

Valley air officials call for fireworks restraint

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Air officials are urging Valley residents to exercise restraint as they partake in Fourth of July festivities.

Fireworks, they say, increase levels of particulate matter which can threaten people's health. Fireworks bring on soot, ash and metals which can be dangerous to people suffering from respiratory conditions.

In addition to the health risks of excessive fireworks pose, the increased particulate matter measured in the air jeopardizes the Valley's progress in meeting air-quality standards.

Big rig goes green

Hydrogen-fueled truck offers emissions-free solution in S.J.

By Alex Breitler

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You'd normally give wide berth to an idling big rig, but a small crowd developed around one such truck as it sat in front of the Port of Stockton's administration building last week.

There was no need to speak up - the engine noise was closer to a hum than a roar.

And there was no need for people to hold their breath - the truck coughed up no black soot.

This rig, in fact, emits only water. You could see it dripping onto the pavement, forming a puddle that seeped into some nearby grass.

"I'll put a cup under there and drink that. Not even kidding," said Tim Mabry, with Rancho Dominguez-based Total Transportation Services, Inc.

It was Mabry who drove this clean and green tractor trailer into town, showing it off to port officials and tenants.

His company, along with Long Beach-based Vision Motor Corp., built the hydrogen-fueled truck as a prototype and has been marketing the technology to potential customers.

Some experts have been skeptical whether hydrogen is a legitimate solution for emissions-free transportation in California. Hydrogen fuel stations are few, and the cost of the technology is relatively high.

Indeed, TTSI's truck - known as the "Tyrano" - costs about \$300,000, compared to perhaps \$120,000 for a conventional diesel truck.

But with possible incentives from air quality officials, and with the hope of prices going down as the technology improves, Port of Stockton officials said the Tyrano might be a good future investment.

They said it could be used locally to haul containers to be loaded onto barges, tying in nicely with another air pollution reduction effort - the port's new marine highway project.

"This could be perfect for us," said Jeff Wingfield, the port's director of environmental affairs.

Mabry's truck carries two tanks of hydrogen, enough to drive 250 miles or more.

The hydrogen feeds fuel cells below the cab. Oxygen is taken out of the air and combined with the hydrogen; that produces not only water, but also electron ions which go through a converter to charge batteries beneath the hood.

The suitcase-size motor, then, feeds off the batteries.

The company says its big rig has nearly twice the torque of a conventional diesel truck. There is no transmission, and no gears - it's more like driving a golf cart than a 28-foot tractor trailer, Mabry said.

And yet, Tyrano can reportedly pull up to 80,000 pounds.

"By the time you get to the fifth gear (in a normal truck), I'm already doing 55 mph," Mabry said. "I'm barely touching the pedal and zooming right along."

In terms of maintenance, there are no more oil changes to worry about. The batteries require replacement after eight to 10 years, but Mabry said battery prices should decrease by then. In terms of fuel, he said hydrogen should run about half the cost of diesel.

For a hydrogen supply, the port could tap Air Productions & Chemicals' facility in Galt, Wingfield said.

Port Director Richard Aschieris said he was impressed when he saw Tyrano take a few laps in the parking lot.

"It was amazing, just how quiet it was," he said.