

Clean snowmobile technology to help reduce Asian pollution

S.F. Chronicle, Monday, December 27, 2004

JACKSON, Wyo. (AP) -- Experts who say they have figured out a way to cut down on snowmobile pollution are taking their technology to developing countries to help reduce the smog from motorized tricycles.

Two-stroke engines are used throughout the Third World because they are resilient and inexpensive power sources, but they also expel a significant amount of fuel and oil.

"There are over 50 million of these vehicles," said Brian Willson, professor of mechanical engineering at Colorado State University and a leader of the project to retrofit the engines. "The impact on air quality and human health is stunning."

According to World Bank estimates, a conventional tricycle emits as much pollution as 50 automobiles and particulate emissions cause 2,000 premature deaths annually in four major Philippine cities.

Willson, students and colleagues founded EnviroFit International with the mission of offering the technology to the developing world. His CSU team won the emissions event in the 2002 Clean Snowmobile Challenge held in Jackson.

The competition was organized when the National Park Service began mulling a ban on snowmobiles in national parks because of the machines' noise and air pollution. The contest has since moved to Houghton, Mich.

Two-stroke engines, the mainstay of the U.S. outdoor recreation industry and used in many power tools, are simpler to construct and lighter because they don't have valves. They are also more powerful than four-stroke engines, which run nearly every car and truck on the road.

But two-stroke engines are less fuel efficient and pollute more.

The CSU team's solution was to use a fuel injector to better meter and mix the air, oil and fuel required for combustion. During the exhaust stroke, less unburned fuel and oil are expelled.

Publicity from the 2002 contest led to a group in Manila inquiring about the technology as it was researching options for reducing emissions by motorized tricycles.

Colorado State University and Bob Walker, owner of Flagg Ranch near Yellowstone National Park -- where the first three Clean Snowmobile Challenges were held -- helped fund development of a prototype.

The team developed one that reduced emissions on a scale similar to its award-winning snowmobile.

The retrofitted tricycle engine reduced hydrocarbon emissions by 90 percent, particulates by 80 percent, carbon monoxide by 70 percent and fuel consumption by 35 percent.

A retrofit costs \$200, but the cost is recovered in about 10 months through fuel savings, Willson said.

EnviroFit hopes to produce and install at least 500 retrofit kits in the Philippines and then expand the project to other Asian countries such as Indonesia, Malaysia, Taiwan, Vietnam, Thailand and China. The organization is also considering bringing the technology to Africa.

On the Net:

EnviroFit International: www.envirofit.org <<http://www.envirofit.org>>

Clean Snowmobile Challenge: www.sae.org/students/snow.htm <<http://www.sae.org/students/snow.htm>>

Air planning for farms is suspect

Visalia Times-Delta, Editorial, Tuesday, Dec. 28, 2004

Your mission is simple: Simply provide a plan that shows how you are going to reduce the amount of pollution your household ejects into the atmosphere every year. That's it. Submit a plan.

Most people wouldn't find that very simple: First, they would want to know just how much polluting stuff their activities are putting into the air now. Exactly what counts? Everything that a person owns, whether they are using it at home or not? And how are you going to measure how much stuff is going into the area from your house alone?

No, that all sounds neither simple nor feasible. In fact, it sounds rather ridiculous. But that is what farmers in the San Joaquin Valley are being asked to do before this week is over: Submit a plan that outlines how they are going to reduce the amount of particulate matter that rises into the air from their farms. Any farm with more than 100 contiguous acres has to provide the plan or suffer consequences that could include sanctions such as fines.

We have to say farmers have a point when they object to this one.

It's not that farms should not be doing their part to clean up the air. They should. They should do it aggressively, and they should do it thoroughly, and not just to make this area more livable for us all, but to ensure the continued viability of their businesses. Polluted air hurts farm production, too.

But farmers are being asked to go about this without the data or the scientific guidance to make decisions that would be truly effective. Consequently, many farmers are putting forth plans that are guesswork at best and fraud at worst.

First: Who knows how much particulate matter (which includes dust, smoke, pollen, exhaust and other airborne matter, both manufactured and natural) a given farm puts into the air? Studies don't exist. Most farms guess according to an extrapolated formula. If a farmer doesn't know what the situation is at the start, how can he hope to improve it?

Second: How do you determine that the particulate matter along Avenue 328, for instance, is from a farm and not from traffic? Or the neighbor's cows?

Third: Where are the technological strategies for reducing particulate matter? The fact is not enough of them have been developed. Farmers are doing the same kinds of things they have always done: hosing down dusty areas, limiting burning and discing on windy days, drip irrigation ... There isn't any technology to hermetically seal a dairy, for instance.

Granted, the agriculture industry was dragged late to the table in taking responsibility for air pollution, and the industry is realizing its responsibility. But if farmers are going to make a contribution, they have to be given realistic alternatives and the tools to make a difference. At the least, they ought to be able to know what they are responsible for. As it is, they believe they are being held responsible for more than their share, because no one is measuring it.

Plans to clean Valley air are imperative. But they must also be practical and reasonable, for farmers and everybody else.

[Fresno Bee column, Tuesday, Dec. 28, 2004:](#)

Resolve to make Valley air cleaner

By Bill McEwen / The Fresno Bee

Cleaning the air requires thinking like an advertising executive.

The effort needs a catchy slogan to bring us together to make the San Joaquin Valley a healthier place.

Facing a stockpile of product and a shortage of customers two decades ago, almond growers used an ad campaign to help transform their often overlooked nut into a huge financial success.

The ad showed farmers in a huge pile of almonds. Their message to shoppers: "A can a week, that's all we ask."

The commercial was smart, funny and memorable. And it easily could be adapted to air-quality efforts. Picture children clutching inhalers or adults using oxygen tanks. Now picture them saying: "Cut two trips a week, that's all we ask."

Consider this column my ad for better air. And consider making a total of 104 fewer vehicle trips in 2005 your New Year's resolution.

Why two trips a week? Set the goal too high -- cutting five trips a week, let's say -- and good intentions would quickly become failed New Year's resolutions. Cutting one trip a week doesn't seem significant enough. Pretty soon, people would ask themselves, why bother?

After analyzing my driving habits and talking to Josette Merced Bello, president of the American Lung Association of Central California, I settled on two trips a week.

Bello said that if the drivers of the 617,246 registered vehicles in Fresno County eliminated two trips, they would drive about 8.6 million fewer miles per week. And that, she said, would be a good start toward the 30% reduction in vehicle emissions needed for the eight-county San Joaquin Valley Air Pollution Control District to reach federal mandates.

Many people won't cut down on their trips; in fact, some people will make more trips next year than in 2004. But if you care about the air, you can easily drive fewer miles.

For example, I drive my dogs to a ponding basin so they can run and play with other dogs. The basin is less than a mile away. From now on, we're walking.

I drive about two miles to the gym. What sense does that make? In good weather, I can ride a bike.

My wife's sister lives a few streets away in the same neighborhood we do. I can't tell you how many times we've piled in the car and driven to her house. Again, what sense does that make? None.

How many times on a weekend do I make a bunch of separate shopping trips instead of linking them? Too many. Five minutes spent planning could save time and spare the air.

Going to lunch with friends from work? Take the most fuel-efficient, clean-burning vehicle you can.

If you know in your heart of hearts you won't change your driving habits, then consider buying a car with an advanced emission system.

It doesn't have to be hybrid. There are some gas cars cleaner than hybrid or alternative-fuel vehicles. According to the California Air Resources Board, the exhaust from these vehicles -- known as PZEVs, or partial zero emission vehicles -- can be cleaner than the air in smoggy cities.

So buy smart.

Or cut two trips a week.

That's all I ask.

Information on clean-burning vehicles is available online at www.driveclean.ca.gov <<http://www.driveclean.ca.gov>>. The columnist can be reached at bmcewen@fresnobee.com or (559) 441-6632.

Global warming not due to pollution

Tuesday, Dec. 28, Modesto Bee, Letters to the Editor

The clean air editorial (Dec.22, Opinions) states that CalPERS asking automakers to explain how stockholders benefit from a lawsuit challenging California's regulations about reducing greenhouse gas emissions is a good idea. The question is irrelevant because the answer is, "Because it would be money down the drain!"

The historical facts don't support significant global warming due to the increase in atmospheric carbon dioxide from its pre-industrial-age level of 0.028 to the current 0.0365 percent, about a 25 percent increase. Granted Fresno's temperature has increased 1.4 degrees, just as the country has seen about a 1.5 degree rise in this century. But most of that rise was prior to 1940, before the advent of nationwide air conditioning and all the added cars after World War II.

P.J. Michaels' new book, "Meltdown," examines global warming horrors and finds they are not true, except for a slight winter warming in Siberia, especially at night.

JIM HOOD
Twain Harte

[Letter to the S.F. Chronicle, Tuesday, Dec. 28, 2004:](#)

Editor -- Your timid tone toward a truly dangerous Bush administration plan strikes me as more squeak than howl. Bush environmental policies don't just "appear" to continue a destructive record -- we're talking absolute certainty.

It's not as if President Bush hides his contempt for good planning, resource protection or the most basic science behind pleas about global warming or world pollution.

We face a calculated juggernaut jeopardizing air or water quality, land use and areas ripe for timber harvesting, mining or oil exploration.

Name a natural resource and this administration will give the most predatory industries free rein to cut roads, spoil irreplaceable treasures and destroy habitat. The way to get this hard-headed administration's attention and deflect environmental disaster is a national political insurgency as focused as other insurgencies that challenge other Bush onslaughts.

ROBERT BECKER
Rumsey (Yolo County)