

## **Dairy turns waste to power**

### **Ag Expo seminar explores new ways of converting dairy waste into energy**

By Shannon Darling, staff writer

Visalia Times-Delta, Friday, Feb. 10, 2006

LINDSAY - Standing just outside a pen of dairy cows, Lindsay dairyman Rob Hilarides looked over a sea of black plastic recently after a rain storm.

Under the black, plastic cover are gallons and gallons of smelly dairy waste, but to Hilarides, the gallons of waste are gold. Under the cover is a series of intricate pipes that trap the methane and other gases produced by the muck. The gas then leaves the manure ponds and is piped to four large engines. The engines, powered by the gas, produce enough power to run his farm, Hilarides Dairy, just west of Lindsay.

The engines constantly whirl in the background as Hilarides explains an electrical room. High-tech equipment in the room monitors how much gas is burned by engines and how much electricity is produced. In time, Hilarides says, the system will pay for itself, and Hilarides' \$15,000-a-month electricity bill will be taken care of by the cows themselves.

"So far, I'm real happy with it," Hilarides said.

It cost about \$1.2 million for Hilarides to put in the system. He had the help of a \$500,000 grant from the California Energy Commission.

He said he wasn't sure if using clean burning bio-gas, which consists of methane and other gases, is the future. However, he says, one of the reasons the grant was given to him by the Energy Commission was to see if it is probable.

Hilarides Dairy milks 6,000 cows twice a day on an 80-stall carousel milker. Everything is powered by the covered manure lagoons that at most dairies sit uncovered, filled with the liquid goo that can be as deep as 18 feet.

"We are just collecting the gas that would otherwise be going into the air," Hilarides said. "It's a pretty clean-burning fuel."

Hilarides hopes that the bio-gas-burning system, which produces about 220,000 cubic feet of gas a day, will be finished paying for itself soon. But after that, Hilarides isn't sure how cheap the system is going to be. So far, not too many dairies use such a system and he doesn't know how much money has to go into keeping the engines at top condition and exactly when that large, plastic cover, which is so strong he can stand on it today, will need to be replaced.

"It's another unknown," he said.

At the Ag Expo, Dan Costa of Agrimass Enviro-Energy will give a free seminar on converting dairy waste into profitable byproducts to power dairies. Costa said he will present the newest in technology and that the technology has advanced further than simply covering lagoons.

He said the Visalia-based company has two products that will reduce air emissions in addition to provide power from dairy waste.

Two of the products Agrimass will present are an induced blanket reactor, which uses an new anaerobic digestion to produce energy, similar to the Hilarides Dairy's method.

The other is thermal gasification, an incineration process that completely burns the waste and powers a steam-driven turbine, Costa said.

"It's a very complete combustion," he said, meaning it does not pollute the air.

## **Herndon hits some bumps in the road**

### **Widening projects slow traffic to a crawl on Fresno 'expressway.'**

By Matt Leedy / The Fresno Bee

Monday, February 13, 2006

Herndon Avenue is meant to be the fastest route across northern Fresno, but construction on the artery and slow traffic have many nearby residents driving around it.

More homes and more businesses have brought more cars to north Fresno, clogging the east-west expressway. A drawn-out road-widening project on Herndon also has contributed to the avenue's sometimes sluggish pace.

That project, between West and Marks avenues, is expected to be finished in May, and two others are set to begin this summer. Fresnoans and city leaders hope the construction will eventually return some zip to Herndon.

Herndon's designation as an expressway means cross streets are staggered at least a half-mile apart and drivers can't pull directly into most businesses. The speed limit for most of Herndon is 50 mph.

Jensen Avenue in south Fresno is the city's only other east-west expressway.

Fresno is using federal money to widen Herndon in several places, and City Council Member Tom Boyajian says the city should have a plan for the entire avenue that leaders can use when considering development plans.

"I think we've done a terrible job on Herndon," Boyajian says. "We need to make this an arterial we can be proud of."

Boyajian wants a Herndon traffic study that can be used to help reduce congestion and air pollution. He says the study also would be helpful when council members consider new housing projects or commercial developments along Herndon.

Council Member Brian Calhoun, whose district includes north Fresno, says Herndon will again give Fresnoans a quick passage across town once the widening projects are finished. "But you can never eliminate rush hour," he adds.

While construction continues, traffic is still slow in the middle of the day. The first phase has been mired in delays.

Last spring, city officials hired M.J. Menefee Construction of Fowler to widen Herndon from four lanes to six lanes between West and Marks, a distance of about one mile. A week of weather delays pushed the completion date to Oct. 5.

Months after the deadline, the work is still far from finished. City officials and Michael Menefee, president of the construction firm, say the \$2 million job won't be finished until May.

The delay, which Menefee blames on the city's slow approval for his traffic-control plans, costs him \$500 per day. The daily \$500 in damages was written into Menefee's contract and is meant to cover Fresno's cost to keep city employees working on the project after it has fallen behind schedule.

City construction manager Efrén Banielos says Menefee's traffic-control plans were analyzed promptly. The project could have been finished on time, he says, if Menefee had kept his crews working full time on the project as soon as he was awarded the contract.

Menefee started late, Banielos says, and for several months used a small crew to do the work.

Many who live or run businesses near the construction site say it has created problems that have lingered for far too long.

"Look, it's an aggravation," says, Robert Barnd, 84, who lives near Van Ness Boulevard and Herndon Avenue. "The constant construction puts dirt in the air."

That dirt must be cleaned from Barnd's pool and swept from his property once a week, says Barnd, whose backyard borders Herndon.

Barnd and his neighbors say they haven't driven on Herndon much since the road-widening project began. Instead, they take Bullard or Barstow avenues.

Drivers' disdain for a congested Herndon Avenue has hurt business at Asuka Japanese Cuisine, says manager Joanne Choi.

She says her lunch crowd has thinned since construction started on the expressway. Asuka is at Herndon and Marks, and former customers have told Choi that it takes them too long to get to the restaurant.

Many work at businesses along Herndon Avenue and have decided to avoid the construction site during their lunch breaks.

"The time they spend in traffic makes it not worth it," Choi says.

Soon after the West-to-Marks project is scheduled to finish, two others are in line to begin.

This summer, Herndon will be widened from two lanes to four between Polk and Weber avenues. It's expected to cost \$2.4 million.

Another widening project, costing \$2.8 million, could start at the same time from Cedar Avenue to Willow Avenue.

Fresno police Capt. Andy Hall, who oversees the traffic enforcement bureau, will be happy when the Herndon projects are finished. Roads are safer, he says, when there's no construction.

But Hall agrees that Herndon needs the improvements.

"In Fresno you can get north and south pretty quickly, but if you take Herndon from Clovis Avenue to Motel Drive, it takes a while," Hall says. "And if you use any other street, it takes almost forever."

## **Tracy puts extra funds in deep end**

### **Council earmarks money for new aquatic center, sports park**

By Mike Martinez, STAFF WRITER

Inside Bay Area

TRACY — When some bonds were refinanced over the summer, it brought a windfall of almost \$16 million to the city coffers.

On Tuesday, the Tracy City Council didn't have any problems spending it.

The city placed a large portion of the money into reserves in preparation of building new facilities, including a new aquatics center, a new youth sports park and a lake on Arbor Road.

Zane Johnston, the city's director of finance and administrative services, said when the bonds were originally issued, the property was not developed and was owned by a handful of people, a situation that is a little more risky for the bond holder.

Now that development is complete in a couple of those districts, where once there was nothing, today there are 5,000 homes, Johnston said. That's 5,000 homes with an assessed value of half a million each owned by (5,000) individual taxpayers. You get the idea it's a much more secure investment for the bond holder.

The largest chunk of money was spent to help pay for a proposed youth sports facility, currently planned for construction on Shulte Road east of Lammers Road on a federally owned piece of property known as the antenna farm.

The city is close to taking possession of the 200-acre property after purchasing a reduced price from the government.

But because of its location adjacent to three major industrial developments, some groups say the sports park should be built on the corner of 11th Street and Chrisman Road, a site city staff is currently trying to place a four-year college on.

The San Joaquin Valley Unified Air Pollution Control District monitors the air quality in the Central Valley from Stockton to Bakersfield. In a letter to the city's community development department, the district said the proposed ball field would contribute to the overall decline of air quality because of increased traffic and continuing operational emissions.

Preliminary analysis indicates that this project alone would not generate significant air emissions, the letter said. However, the increase in emissions from this project, and others like it, cumulatively reduce the air quality in the Central Valley.

The second biggest cut of the pie went toward the proposed aquatics center. If the money isn't spent on developing a water park, or adding amenities to one in development, the money may eventually be moved to fund something else.

The Tracy City Council directed staff members in January to negotiate with a development company that offered to build a new aquatics park in exchange for naming rights and a priority to build homes when Measure A sunsets in 2012.

Passed by voters in 2000, Measure A limits the average number of new homes built in Tracy to 100. With the large number of homes built over the past few years, only homes prioritized as in-fill and affordable can be built.

The Surland Companies has offered the city \$10 million to build, design, and get it done as fast as possible for 200 building permits, when they become available, plus the option for 50 allotments to build affordable housing.

If built, the facility would feature a warm water therapy pool, 50-meter competition pool, a lazy river, community center, snack bar and locker rooms.

The current community pool, Joe Wilson Pool located on the eastern end of Dr. Powers Park, does not meet the current standards for a public swimming pool in size, depth, deck size and amenities, and often has to turn away use requests from swim groups and aquatics program organizers.

The issue came to a boil over the summer when swim groups were left high and dry with the overcrowded Wilson Pool and the Tracy High swimming pool drained for repairs.

Mark Connelly, the author of Measure A, said the deal possibly puts off the building of the aquatics center for several more years, and if the development isn't approved, the pool is in a terrible location.

We have the ability, the money and the property to build the aquatics center now without having to approve the Ellis project, which is outside of city limits, Connelly said. Its terrible planning and offers the same kind of bribe, that is way too low I might add, that Ellis offered (last election.)

### **Brain drain: Not everyone leaves; some come back**

By Jaclyne Badal, staff writer

Visalia Times-Delta, Saturday, Feb. 11, 2006

When Rosemary Perez started school, she spoke no English.

"It was sink or swim," said Perez, now a Mt. Whitney High School teacher.

Perez said she learned English out of necessity and finished high school to please her parents. Higher education was not part of her plan after graduation.

"Being a Hispanic in the early '60s, most people just thought I'd get married, work in a packinghouse and raise some kids," she said.

Perez had experience working in packinghouses. But agricultural work was not a part of her plan either.

"In the summer, I'd pack peaches, plums," she said. "I hated peaches. Oh, I hated them. As soon as I graduated, I got a job in a financial institution, thank you, Lord."

Perez held a variety of jobs in business and education until her husband and a friend encouraged her to go back to school.

"I started with one night class, one semester," she said.

Nearly two decades later, Perez became one of the 4.3 percent of adults 25 and older in Tulare County to hold a graduate-level degree.

She commuted to Fresno for her bachelor's and earned her master's through a correspondence program from Grand Canyon University in Phoenix.

Although many of the county's college-educated residents leave the area with hopes of finding better opportunities elsewhere, Perez said she has no desire to move.

Her family is here, and staying close to them is a top priority. She said her sons wanted to live near the family, too. Both returned to Tulare County after graduating from California State University, Fresno, and stayed in the area after earning master's degrees.

Skipping town is not the way to a better life, Perez said. Residents can make Tulare County a better place to live by working to improve their communities.

Perez said she tries to make a difference in students' lives through her role as a teacher. She has a migrant education class and works on the school-to-career program at Mt. Whitney.

Many of her students say they are too poor or do not speak English well enough to attend college, Perez said.

"Don't tell me that," she tells her students. "Don't think because you talk with an accent or because your parents are poor that you can't go to school. You can break the cycle."

### **Overcoming obstacles**

Perez said she picked crops, packed fruit and worked in canneries from age 8 until she graduated from high school. She said she knows life is difficult for the children of immigrants but said disadvantaged students can overcome their backgrounds with enough personal dedication and adult support.

"It's so important to motivate, to encourage," she said.

Perez said not all of the students who leave the county to go to a four-year institution will return, but she thinks many will come home again - just as her sons did.

"It's a good community," she said. "I think it has a lot to offer."

### **Advantages**

Tulare County has more advantages than disadvantages, Perez said. It is close to the mountains and the beaches and close to Fresno, which has a lively entertainment scene.

The county also has cozy, small-town feeling.

"You can meet so many different people," she said.

Tulare County is a great place to raise a family, Perez said. City recreational departments offer athletic leagues for children and community groups here have family-oriented events.

The housing prices are also affordable for young couples, she said.

"Both of my sons and daughters are teachers, and on teachers' salaries they've got beautiful new homes," Perez said. "There's no way in the Bay Area or in Los Angeles they'd be living the same lifestyle that they are. Who can buy a home in the Bay Area?"

Perez said Tulare County gives her plenty of reasons to stay.

This is home, she said. Even the [poor air quality](#) isn't enough to make her move way from the area she loves.

"I'm willing to deal with it," Perez said. "I have hope for us. I think somehow we are going to be able to overcome our problems."

## **Brain drain strain Tulare County loses its brightest**

Jaclyne Badal, staff writer

Tulare Advance-Register, Saturday, Feb. 11, 2006

Leah Young, 24, said she never looked back when she traded Visalia for Manhattan. Her hometown wasn't a bad place to live - it just didn't give her a reason to stay.

"I randomly got this call to take a job on a Friday night," said Young, a University of California, Berkeley, graduate. "I went to Target, got the two biggest suitcases I could find, packed as much stuff as I could fit and I was on my way."

She was in New York on Monday.

College of the Sequoias alumnus Jared Wilson said moving back to the Valley wasn't an option when he started looking for a job. He stayed in Los Angeles County after graduating from California State University, Long Beach.

"At this point in my career, I know that right here is where I have to be," Wilson said.

Young professionals such as Wilson and Young have become a hot commodity because they produce with their minds and not with their muscles.

"Knowledge is the new fuel powering economic growth in the 21st century," the Federal Reserve Bank of Kansas City said in a paper.

"By spurring new ideas and innovations, knowledge boosts productivity and creates new products, new firms, new jobs and new opportunities."

Knowledge workers are in demand, and the trend is expected to grow increasingly pronounced as more baby boomers retire than there are young professionals to replace them.

Regions that successfully attract knowledge workers will become worldwide leaders in economic development, experts say. Areas that lose workers will fall further and further behind in the global marketplace.

Right now, Tulare County is losing more college-educated professionals than it gains, according to the U.S. Census Bureau. The challenge for local policy-makers is to find a way to stop the brain drain, but economists say it will be a long and bumpy road.

The county's work force is one of the most poorly educated in the United States, according to Census Bureau data.

In a ranking of 236 counties across the nation, only Kern and Stanislaus among California counties had lower educational levels than Tulare County, where about 14 percent of adults 25 and older are college educated.

A person in Tulare County is two times more likely to meet a high school dropout than a college graduate.

Compare that with Colorado's No. 1 Boulder County, where about 57 percent of adults have at least a bachelor's degree.

To help counteract the problem, Assemblyman Bill Maze, R-Visalia, co-authored legislation that allowed community colleges and universities to jointly offer bachelor's degrees from a two-year campus. Under the law, a COS student could get a four-year degree without leaving the county.

Experts say adding more schools is a start, but more fundamental changes are needed. Otherwise, even locally educated graduates will pick up and move elsewhere, said Antonio Avalos, a labor economist at California State University, Fresno.

### **Technological change**

Knowledge workers have a skill-set that makes them highly mobile, Avalos said. They can live anywhere.

"The nature of the job is changing," he said. "The nature of occupations is changing. One important thing that I've noticed over the last few years is that physical presence in the services sector for a job is not as big of a deal as it used to be."

Avalos said technological change has made it possible for a knowledge worker to live and work in totally different places.

High-speed Internet connections, wireless phone services and increasingly powerful computers have made location irrelevant for many knowledge workers, Avalos said.

This means knowledge workers have more choices than ever before. Politicians around the country are scrambling to make their regions more marketable.

Pennsylvania uses extensive advertising campaigns to lure knowledge workers to the area and keep them from moving West. Wisconsin's 2020 plan for a model economy includes goals, which it is exceeding, for increasing educational levels within the state. North Dakota's governor will personally call young professionals at home if he knows they are considering a move into the area, economist Rebecca Ryan said at a community lecture in Fresno.

Regionally, Fresno has been a leader with both public and private efforts to make the area more marketable.

Mayor Alan Autry's Creative Economy Council released a report last month called Making the Grass Greener that included suggestions for attracting - and retaining - knowledge workers. The Fresno Leading Young Professionals network tries to foster a sense of community through meetings, socials and workshops. And the Fresno Famous Web site acts as a community clearinghouse for information about events in the area.

### **Policy issues**

Tulare County's efforts to stem the brain drain have been more timid. Supervisor Connie Conway said the economic climate makes it difficult to go after young professionals.

"It kind of becomes the chicken or the egg," she said. "Do you develop a work force first that can do these jobs, even though they aren't here? Or do you try to bring the jobs and then develop the work force?"

For Ryan, the economist and consultant, the answer is clear. "Companies follow talent," she said.

Ryan said there was a push in Ireland to improve every citizen's education by one level - from high school to college, from college to graduate school. The jobs followed.

"Have you been to Dublin lately?" she said. "You can't swing a cat without hitting one of our companies."

Texas-based Dell computers is now Ireland's No. 1 exporter, according to the company's Web site.

Avalos, the Fresno State labor economist, said public policy here may be hurting the area rather than helping the educational problem.

Lacking an educated work force, policy-makers sell the area as a place with low-wages, cheap land and great tax breaks, he said.

"In the long run, they produce what we see," he said. "Low-paid jobs, low-skilled jobs and things that do not necessarily reflect a good standard of living for the whole population."

Conway said it was a cynical viewpoint.

"I'm not sure cheap is the word we use," she said.

Conway said the work force here is marketed as abundant.

The unemployment rate in the Visalia-Tulare-Porterville area was last listed at 9.6 percent by the California Employment Development Department.

"There's an available work force here," said Glenn Morris, executive director of the Visalia Economic Development Corp. "It's a work force that has a good work ethic that is willing to work hard for a day's wage. The employer knows he's going to get a good value."

The corporation succeeded in attracting several manufacturing and distributing companies to the area last year, which was its goal. While those jobs help with the unemployment rate, they do little to stop the brain drain.

The Employment Development Department forecast the occupations with the most openings in Tulare County from 2001-08. Only five of the top 50 jobs required a bachelor's degree or higher and none of the top 10 jobs required previous work experience.

By comparison, 12 of the top 50 jobs with the most openings in San Francisco will require a bachelor's degree or higher.

Although manufacturing, distribution and agriculture will continue to be an important part of Tulare County's economy, Avalos said politicians need to think about improving the quality of jobs they bring to the area.

They also need to focus on developing the area itself, he said.

### **Amenities**

About 75 percent of Americans 28 and younger first pick a place to live and then look for a job, according to Next Generation Consulting, Ryan's Wisconsin-based research firm that helps communities and companies attract knowledge workers.

"They want to live in cool communities," Ryan said.

Areas that offer a wide range of activities are most appealing. Tulare County does not pass the test, said Wilson, the former Visalian now living in Southern California.

"There's not really an attractive place for young people to go," he said. "They do have the mountains, but not everyone is a mountain person."

Los Angeles is different.

"I can rent a boat tonight and go on a cruise with a girlfriend at the drop of a hat," he said. "There are so many things that just come up randomly. There might be a movie premiere, and you can go check out that."

Avalos said salary is not the only thing that matters to employees: Quality of life counts, too.

"You cannot attract talent where they lack amenities," he said. "It's not going to happen. You can pay them a lot of money, and they're not going to come."

Avalos said intellectual vitality, progressive communities and lively art scenes are some examples of talent magnets that draw young professionals.

Tulare County gives residents access to some of those ingredients. Arts Visalia curator Andrew Alvarez said the local arts community has made efforts to bring more culture to the area.

"It's getting better all the time," he said. "We're developing new projects and bringing in new artists from outside the area, so you don't necessarily have to go to the Bay Area or Los Angeles to see top quality art."

Music, theater and community events are also available in Fresno - only a 45 minute drive away.

Alvarez said the art scene in Tulare County will never rival its big-city counterparts, but economists say that isn't necessary as long as the region excels in other areas.

"The answer is not to try to keep up with the communities around us," Ryan said. "I'd never recommend that you try to be more San Francisco."

Ryan said each community should play to its individual strengths to attract knowledge workers.

Avalos agreed. He said Tulare County has a lot to offer prospective residents. It is close to the mountains, has little traffic and enjoys the feel of a smaller town.

He said the county could use its agrarian appeal to compensate for the lack of nightlife or research institutions.

But to do that, the county needs to [clean up its air](#) and water, lower crime rates and better the public school system.

### **Demographics**

A more immediate solution may be to celebrate the city's cultural diversity.

Tulare County relies on migrant farmworkers for much of its agricultural work. Most workers are poorly educated and do not speak English well.

The county's demographics help explain the low educational levels, but economists say the ethnic diversity could be an asset, too.

Immigrants bring cultural vitality to an area, Ryan said. Politicians should use that vitality by sponsoring multicultural fairs, she said. Young, who left Visalia for Manhattan, said diversity - both cultural and political - makes a city attractive.

She said she is disappointed that the county does not celebrate its diversity. Returning home for family visits is always a cultural shock for her, she said.

"I'd miss the different kinds of food you could get, the different kinds of people you would meet," she said. "I'd always go back to the whole diversity thing - different kinds of people from different kinds of backgrounds."

Eighty-seven percent of Tulare County's residents identify - at least partially - as a member of a minority group, according to the U.S. Census Bureau.

### **Briefs**

Fresno Bee, Saturday, February 11, 2006

CARSON, Calif. (AP) - A new \$1 billion power plant will turn an oil byproduct into electricity for 325,000 homes.

BP American and a subsidiary of Edison International announced they will team up to build the plant, which will convert petroleum coke into cleaner-burning hydrogen to generate electricity.

It will be the first in the United States and only the second in the world to use the new conversion technology, which is designed to reduce air pollution. The other plant is in Scotland.

The plant will be built next to an existing refinery in this suburb south of Los Angeles.

It will produce carbon dioxide, a greenhouse gas, as a byproduct but it will be stored in underground reservoirs, BP and Edison officials said.

Construction still requires approval from state pollution regulators. Operations were expected to begin in 2011.

## **Thoughts of winter far away today**

By Jim Guy / The Fresno Bee

Saturday, February 11, 2006

It may seem premature to put away the snowshoes and break out the tennis rackets, but as temperatures reach close to decades-old records, that could be an option for some in the Central Valley today.

This, even as areas on the East Coast hunker down and await an anticipated blizzard.

Fresno's high today is expected to be 72 degrees, just one degree short of the record set in 1925. That follows Friday's mark of 72 degrees, three short of the 75-degree warmth of 1961. Sunday, Fresno's high is expected to reach 71.

Normal temperatures for the first part of February are in the low 60s, but Daniel Harty, a meteorologist at the National Weather Service in Hanford, says light offshore flow over the region is keeping marine effects from the Pacific from cooling the Valley.

But before anyone tries to attribute the warmer weather to La Niña, Harty says temperatures will be shifting back to more normal temperatures by the middle of next week.

So those who like their winters don't have to give up hope yet. Skiers, for example, can take advantage of some warm-weather skiing as local resorts still have a lot of snow on the ground. Sierra Summit has 6 feet.

On the Valley floor, the enjoyment of the warm weather will probably be tempered for some by hazy skies. The San Joaquin Valley Air Pollution Control District says air quality will be unhealthy for sensitive groups because of particulate pollution.

## **Capturing Pig Power**

**The Kyoto pact puts nearly 600 projects in the developing world. One example: energy fueled by hog waste.**

By Marla Dickerson

Los Angeles Times

February 12, 2006

Georgina Cano had long resigned herself to the stench from the hog farm just up the road from her rural home.

Stagnant lagoons of waste from thousands of squealing pigs fouled the air for miles in this flat stretch of central Mexico. Cano's three children complained and occasionally fell ill, but she figured it came with living in a region that produces much of the nation's pork.

Last year, the smell diminished even as the hog production continued.

"Now I hardly notice it," said Cano, 37, gesturing toward the low sheds about half a mile from her home. "It's healthier for the children."

Cano's family and neighbors can credit a little known Irish company for helping them to breathe

easier these days.

Thanks to the Kyoto Protocol, the 1997 international treaty on climate change, efforts by industrialized countries to fight global warming are popping up in far-flung places like Villagran, a hamlet about 40 miles southwest of the city of Queretero.

Nearly 600 Kyoto-related projects are in the pipeline in the developing world, according to a recent tally by a Danish climate research center funded in part by the United Nations. About 40% of them are in Latin America, including hydroelectric power plants in Honduras and wind-powered turbines in Chile.

The accord, which the United States has not ratified, calls for reducing overall greenhouse-gas emissions by major industrialized countries in the period 2008-2012 to amounts at least 5% below 1990 levels.

More than 150 nations have signed and ratified the treaty, but the burden to reduce emissions falls on about three dozen industrialized countries responsible for most of the climate mess. One way for industrialized countries to meet their reduction targets is to support environmental projects in developing regions. Dubbed the Clean Development Mechanism, it was designed to lower compliance costs for rich nations while funneling much-needed development to poor ones.

The climate agreement set up a trading system — administered by the U.N. — in which the rights to spew pollutants can be bought and sold like stocks. That has spurred interest from entrepreneurs who are funneling money into environmentally friendly projects in exchange for anti-pollution credits.

Each credit represents the equivalent of a ton of carbon dioxide kept out of the atmosphere. Although registries for these and other types of emission credits still are being set up by the U.N., buyers and sellers already are making deals.

AgCert International, the Dublin, Ireland-based company that installed clean-up equipment on the hog farm near Cano's home, has made commitments to provide nearly \$90 million of emission credits to European utility companies and petroleum producers to help them meet their reduction goals.

Chief Executive Gregory Haskell, an American and serial entrepreneur with no previous agriculture experience, calculated that more than 1 billion credits would be required to satisfy Kyoto obligations. The opportunity to fill some of that demand led him to found AgCert in 2002.

"We looked for what the need was in the marketplace," Haskell said.

In Latin America, AgCert has installed pollution-control equipment on about 230 hog and dairy farms in Mexico and Brazil, according to company officials. AgCert hopes to have more than 1,000 facilities operating by the end of 2007 in those nations as well as in Chile and Argentina.

Haskell said about 7% of the world's production of greenhouse gases could be attributed to large animal feeding operations, which produce several harmful byproducts, including methane.

AgCert replaces open waste lagoons with pits that are lined and covered with a plastic that traps gases emitted by decomposing waste. The gases are piped out of the pit and burned off in a combustion unit that looks like a giant torch. The gases also can be used to fuel generators to provide electricity for the farm, similar to the manure-powered city of Bartertown in "Mad Max Beyond Thunderdome," the 1985 film starring Mel Gibson.

In addition to providing renewable energy and reducing emissions by around 95%, the system keeps animal waste from leaching into the water table while greatly reducing the foul smell. The

process also yields organic fertilizer that farmers can sell or use on their crops.

AgCert pays for the construction and equipment, which averages about \$150,000 a farm, and takes care of all maintenance for 10 years.

The company also is working out a formula to give farmers a share of the revenue from sale of the emission credits, said Hernan Mateus, the company's general manager in Mexico. He said the projects gave jobs to local construction firms and made neighbors living downwind very happy.

"Everybody wins," Mateus said.

Large swine operations such as the family-owned Grupo Soles, which produces about 260,000 hogs a year in northern and central Mexico, are jumping at the opportunity to upgrade their slurry systems on someone else's dime. Like their U.S. counterparts, Mexican farmers have found themselves subject to more stringent government rules on air and water quality. That has made managing manure one of the most costly and time-consuming aspects of livestock farming.

"It's like a tax," said Jose Buenrostro Pablos, general manager for the group's operations in central Mexico. "Now thanks to the Kyoto Protocol, we have this opportunity to solve the contamination problems."

It could also help Mexico produce better pork.

On Soles' farms in central Mexico, workers and visitors must strip, shower and don company-issued jumpsuits and rubber boots before approaching the squealing animals. The precautions are part of a battle to prevent the spread of hog cholera and other ailments that can devastate herds in this part of the country. Buenrostro said that capping slurry pits and covering open trenches that carry waste from the barns would help cut down on insects and other disease-carrying vermin.

At Soles' farm near Villagran, Buenrostro walked to the edge of a former manure lagoon now clean enough that the company is considering using it for fish farming. Nearby, a generator hummed close to the covered pit where pig waste was being converted to energy.

The farm is still testing the system. But Buenrostro said it would soon light the barns, run the automatic feeders and water pumps and even heat the water for employees' showers.

"Can you imagine doing all that from manure?" he asked.

Many experts applaud the effort to give the private sector a major role in reversing climate change. Some analysts predict that trading in emission credits could become a \$40-billion market by the end of the decade.

Still, the pay-to-pollute strategy has plenty of critics.

Nations of the former Soviet Union, whose economies tumbled after the fall of the Berlin Wall, are polluting well below their 1990 levels. The Kyoto deal gives them the ability to boost their emissions or sell those rights under certain conditions. Some critics fear that could flood the market with cheap credits while doing little to clean up the atmosphere.

Meanwhile, investors are gravitating toward projects that generate large amounts of credits but virtually nothing in the way of development. Architects of the Clean Development Mechanism strategy envisioned a massive technology transfer, with companies seeding poor nations with renewable energy from the sun, wind and water. Instead, the lion's share of credits are coming from cleanup projects such as curbing emissions from dirty refrigerant plants.

Although that's good for the environment, these projects provide little in the way of jobs and infrastructure that many poor countries had hoped Kyoto would deliver. Meanwhile, rich nations benefit from a steady supply of low-cost credits.

"Some developing countries were sold a bill of goods," said Aaron Cosbey, a senior advisor with the International Institute for Sustainable Development based in Winnipeg, Canada. "The spinoff benefits are minimal."

Cosbey said the number of clean development projects in the pipeline would need to be about five times as large as it is now to come close to meeting Kyoto targets. And with no agreement to extend the climate treaty beyond 2012, some environmentalists wonder whether investor interest will dwindle within a few years with no guarantees that their credits will be worth something.

But other experts say carbon trading is here to stay. The European Union has set up a parallel, internal system for trading pollution allowances among its members. And some veteran observers believe that the Europeans, who have agreed to lower their emissions by 8% below 1990 levels, will stay the course on greenhouse gas reductions regardless of what comes after the Kyoto pact. After a recent climate conference in Montreal, one analyst noted that more investors were registering their clean development projects with the U.N. in such a way that they could receive credits for as many as 21 years.

"They are betting that there will be a market," said Jorund Buen, director of Point Carbon, a consulting firm in Oslo. "There is no other good reason for it."

### **Bakersfield Californian, Editorial, Monday, Feb. 13, 2006: EPA dust rules choke scientists**

Even the U.S. Environmental Protection Agency's own scientific panel choked on proposed new dust rules. In an unprecedented move, the Clean Air Scientific Advisory Committee challenged EPA Administrator Stephen L. Johnson, contending he has ignored their recommendations regarding the health hazards of dust emissions.

Proposed EPA rules would tighten controls over air polluting dust in urban areas, but relax rules in rural areas. Agriculture and mining will benefit.

Some members of the EPA's scientific advisory panel contend the administrator twisted and distorted their findings and recommendations to support the proposed dust rules.

Public comment is being accepted until April on the rules, which may degrade already polluted air in rural areas, such as the San Joaquin Valley.

### **Bakersfield Californian, Letter to the Editor, Sunday, Feb. 12, 2006: We need new leaders**

County government has apparently allowed the dumping of a hazardous waste next to farms, dairies, duck clubs, Poso Creek and the Kern Wildlife Refuge for many years. Now it says a cleanup must take place by the people who did the dumping. I think a cleanup of the county officials who looked the other way also needs to be done. Planning Director Ted James and Supervisor Ray Watson should resign immediately over this scandal.

Why does it take a Wasco city councilman demanding answers to his questions for almost a year before this kind of exploitation of our air, soil and water comes to light? Is profit for a few the sole criteria for approval of permits in Kern County?

We need to protect our quality of life a little better and get some leaders who represent people first and business interests second.

-- TOM FRANTZ, Shafter