

PIPELINE

NEWS ABOUT CONTRA COSTA COUNTY'S REFINERY INDUSTRY

WINTERSPRINGSUMMERFALL 2008



CLEAN, GREEN AND LEAN

Now more than ever, America is seeking energy independence and relief at the pump — while at the same time improving and protecting the environment. In short, we want it all.

And Contra Costa County area refineries are stepping up to the plate, developing and implementing environmentally friendly, green projects that also help save consumers money.

"It's always a challenge coming up with ways to reduce our carbon footprint," explains Tesoro Public Affairs Officer Ken Dami. "But years ago, Tesoro made smart investments in their refineries that do just that."

Today, Tesoro's projects emphasize more than just safety, efficiency and facility improvements — they're also reducing emissions and pollutants, and developing innovative ways to improve the environment.

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"It's a costly endeavor, but the end result ensures a healthy community — environmentally, economically and safety-wise," says Dami.

Like Tesoro, Chevron is also responding to the call — replacing old technologies with newer, greener ones; and developing and implementing projects that improve efficiency and reduce greenhouse gas emissions.

"Today, you can design a plant that is better for the environment," says Chevron Public Affairs Officer Walt Gill. "One of the major challenges is creating designs that incorporate

and retrofit new technologies into existing facilities."

And addressing climate change has also become increasingly important. "In addition to meeting the energy challenge, we need to meet the climate challenge," says Shell Martinez Refinery Spokesman Steve Lesh. "This is something we're very serious about."

As one of the first energy companies to acknowledge the threat of climate change, Shell recently joined the Climate Registry as one of 53 founding reporters, calling for action by governments and the oil industry.

"Shell has a longstanding commitment to investing in upgrades to benefit the environment," Lesh said. In fact, Shell has invested almost \$70 million in environmental upgrades over the past three years.

"We're not yet where we want to be, but we know where we want to go and we have some of our best minds working on solutions," he said. "The bottom line is Shell is committed to investing in the equipment, research and processes to ensure continuous

ENERGY EFFICIENT PROJECTS — BETTER FOR YOU AND THE ENVIRONMENT

ABOVE AND BEYOND

TESORO

ALAN SAVAGE

Environmental, Health and Safety Manager

Tesoro Environmental, Health and Safety Manager Alan Savage knows the public expects non-negotiable safety and environmental stewardship. “That’s why it’s one of our Core Values,” he explains. “We owe it to our communities and our employees. It’s simply the right thing to do.”

His commitment to green and cost-efficient technologies is evident in the projects he helps develop and oversee. “Some environmental regulations aren’t actually being enforced yet, but our commitment to the environment is not dependent on these regulations — that’s why we’ve chosen to go with newer technologies now, before they’re required.”

Take for example the recently completed Coker Modification Project, which is reducing criteria pollutants by 3,000 tons and will reduce greenhouse gasses by 400,000 tons per year.

“We take California’s greenhouse gas reduction initiative very seriously,” Savage says. “By 2020, California intends to reduce its greenhouse gasses by 20% — this project helps in getting us there.”

Another major ongoing project involves replacing older tanks with fewer, newer, more efficient tanks. Reducing Tesoro’s carbon footprint even further, steel from older tanks is recycled for future use.

“We’ve simply become more efficient in our operation so we have a need for fewer storage tanks,” he explains. “What’s more, the new tanks are welded, not riveted, meaning more reliability.”

Tesoro has invested millions of dollars in these projects, but Savage sees it as a solid investment for the future — and the future involves community.

“Our investment in these projects offer huge benefits to the community in terms of safety, economic and environmental standpoints,” Savage says. “From a safety standpoint, you have fewer incidents; from an economic standpoint, you have more jobs and more revenue pumped through the community; and from an environmental standpoint, you have reduced greenhouse gas emissions.”

Savage says these projects are just part of Tesoro’s long history of serving area communities. “I’m very excited about reducing our carbon footprint — global change starts with the community, and I’m proud of Tesoro’s commitment,” he said. “It’s a win-win-win — we win, the community wins and the environment wins.”

IN FOR THE LONG HAUL

CHEVRON

BOB CHAMBERLIN

Engineer and Senior Environmental Specialist

Bob Chamberlin is an engineer by trade — an environmental specialist by choice. For more than 30 years, Chamberlin has worked to improve Chevron’s Richmond Refinery and the environment, readily accepting the challenges that accompany the process.

Chamberlin is driven by Chevron’s ongoing commitment to operate its refinery reliably and efficiently, while reducing air emissions — and he’s always got his eye on the big picture.

“I’ve been with Chevron for a long time,” says Chamberlin. “One of the reasons is because our projects focus so heavily on benefitting the community and the environment.”

Chevron’s most recent effort — the Richmond Refinery Energy and Hydrogen Renewal Project — upgrades and replaces outdated equipment, improves energy efficiency, and lowers overall emissions, including greenhouse gasses.

“This project improves the environment and ensures more electricity for the public, including the City of Richmond,” says Chamberlin. “And the improvements we’ve implemented cost city taxpayers absolutely nothing.”

Now that the four-year permitting process is complete, Chamberlin says the rewards will be realized. “We are

now beginning construction of the hydrogen plant and hydrogen purity — two major parts of the project,” he explains. “This is a much cleaner process and will greatly reduce emissions, while improving the purity of the hydrogen and conserving energy.”

The Richmond Refinery Energy and Hydrogen Renewal Project also entails replacing a 1930s power plant — replacing steam with co-generation technologies, resulting in better efficiency and output.

An added benefit to these project improvements is the positive community impact. “This will generate millions of dollars in tax revenues for Richmond, as well as create job opportunities for Richmond residents,” Chamberlin says.

“This project clearly demonstrates our commitment to the environment and the surrounding community,” Chamberlin says. “I’m proud to be a part of this project and the Chevron family.”



SAFETY FIRST

ConocoPhillips

PHIL STERN

Health, Safety & Environmental Manager

ConocoPhillips Health, Safety and Environmental Manager Phil Stern says safety is at the heart of every decision made at the ConocoPhillips Rodeo refinery. At ConocoPhillips, safety consists of many layers — employees, community and the environment.

“It always starts with safety — a safe operation means not just environmental compliance, but actually positively impacting our neighboring communities,” says Stern. “A key component is engaging local communities, educating them on the issues and inviting them to be a part of the solution.”

The ConocoPhillips Rodeo refinery has been a model for community involvement and support — a critical component in developing and implementing projects that balance new energy production with community health, safety and the environment.

The Rodeo refinery’s Clean Fuels Expansion Project is an example of its commitment to safety and energy efficiency, and is fast becoming one of the largest and most successful projects in ConocoPhillips’ long history.

“All of us at the Rodeo refinery are extremely proud of the Clean Fuels Expansion Project,” Stern says. “These improvements and additions have a positive impact on both safety and the environment, achieving new energy production while reducing emissions and pollutants.”

For example, the Hydrocracker Expansion converts 20,000 barrels per day of high-sulfur gas oil to ultra-low sulfur gasoline and diesel — increasing the production of the cleanest burning gasoline and diesel sold in the U.S., which lowers your vehicle’s emissions.

Stern is proud of what the Rodeo refinery has achieved, never taking for granted that it’s employees and community — not the process equipment — make things happen.

“ConocoPhillips wouldn’t be successful without people — our employees and our communities — and we all have high values and principles,” Stern says. “It’s these fundamental principles that continue to make our refinery one of the best in the

world, and I’m proud to be a part of a company that doesn’t just talk values, but lives them.”

LETTING OFF STEAM

SHELL

NATALIE BRADEN

Senior Staff Engineer

Boasting several major expansions and improvements throughout its almost 100 year history, the Shell Martinez refinery has a strong record of innovation and good work processes.

In addition to expansions and equipment upgrades, it is important for facilities to run the right way in order to reduce greenhouse gas emissions. No one knows this better than Shell Senior Staff Engineer Natalie Braden.

“Currently, we’re working on improving processes that will increase efficiency and safety,” she says. “If you don’t have good process practices, the capital means nothing — it would be like running an air conditioner with your windows open.”

One particular area Braden focuses on is the use of steam.

Shell’s Steam Optimization project is an example of something that involves very little capital, but can have a big impact on greenhouse gas emissions. “The whole idea is to reduce the steam used to generate heat in the refinery process,” Braden says.

And better for the environment, she says, on many levels. “By reducing steam, we reduce combustion. By reducing combustion, we reduce greenhouse gasses. So essentially, we’re finding ways to increase energy efficiency while at the same time creating a safer, cleaner environment.”

It’s not just the local communities experiencing the benefits. “We look at these types of projects as both advantageous to the local community, and the global community,” Braden says. “We have an obligation — to our children and their children’s children — to do as much as we can to ensure our environment is protected for years to come. This comes into play with each and every project we do — and we take it very seriously.” ■

WHAT THE EXPERTS ARE SAYING

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Natalie Braden, Senior Staff Engineer
Shell Martinez Refinery

“It always starts with safety — and a safe operation means achieving environmental compliance, and ensuring our operation positively impacts our neighboring communities and beyond.”

Phil Stern, Health, Safety & Environmental Manager,
ConocoPhillips

“I’ve been with Chevron for a long time. One of the reasons I choose to stay is because our projects focus so heavily on benefiting the community and the environment.”

Bob Chamberlin, Engineer & Senior Environmental Specialist

“Our investment in these projects are a huge benefit to the community — from a safety, economic and environmental standpoint.”

Alan Savage, Environmental, Health & Safety Manager, Tesoro



CLEAN

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improvement.”

ConocoPhillips has also been a leader in addressing climate change, as well as energy security. As the first integrated energy company in the United States calling for a mandatory national framework to address greenhouse gas emissions, ConocoPhillips Rodeo refinery Public Affairs Spokesman Mark Hughes says the majority of Rodeo plant improvements focus not only on increased efficiency, but also reducing emissions.

“A fundamental aspect of all of our projects is addressing the environment — how to better our environment and reduce our carbon footprint, while increasing safety and efficiency. This is at the forefront of everything we do,” said Hughes.

Contra Costa County area refineries have made great strides in addressing the environment, investing millions of dollars in projects aimed at reducing emissions and increasing safety.

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AREA REFINERIES HAVE
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IN ADDRESSING THE
ENVIRONMENT, INVESTING
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IN PROJECTS AIMED AT
REDUCING EMISSIONS
AND INCREASING SAFETY
— WITHOUT PASSING
THESE COSTS ONTO
CONSUMERS.**

These green projects offer not only a better environmental future, but also a more promising economic future as well — providing hundreds of jobs throughout Contra Costa County, and ultimately a greener future for everyone. ■

