

# premier **refiner** ... and **neighbor**



2017 social responsibility report



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Valero Energy Corporation, through its subsidiaries, is an international manufacturer and marketer of transportation fuels and other petrochemical products. A Fortune 50 company based in San Antonio, Texas, with approximately 10,000 employees, Valero's independent petroleum refining operations include 15 refineries with a combined throughput capacity of approximately 3.1 million barrels per day, and its ethanol operations include 11 plants with a combined production capacity of approximately 1.45 billion gallons per year. Valero, in a partnership, operates a renewable diesel plant that is one of the largest biomass-based diesel plants in the United States. In addition, Valero owns the 2 percent general partner interest and a majority limited partner interest in Valero Energy Partners LP, a midstream master limited partnership. Approximately 7,400 fuel outlets carry Valero's brand names in the U.S., Canada, United Kingdom and Ireland.

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Valero headquarters employees turn out for their United Way Day of Caring event in 2017 at Seton Home and St. Peter-St. Joseph's Children's Home in San Antonio. Approximately 270 volunteers performed indoor and outdoor beautification projects that saved the agencies an estimated \$35,000 in labor costs. In addition, the Valero Energy Foundation presented a check for \$30,000 to Seton Home, which provides shelter for homeless pregnant and parenting teens, and \$15,000 to St. PJ's, a shelter for teens in crisis.

# a message to our stakeholders



Joe Gorder, Valero Chairman, President and Chief Executive Officer, greets two students participating in the San Antonio Independent School District's "Pipeline for College Success" program, which Valero's foundation awarded a five-year, \$8.4 million grant to help students enroll and stay in college.

At Valero, we are committed to excellence in our operations, and our performance in a variety of areas exemplifies that commitment. But we are also a responsible corporate citizen and neighbor.

We are pleased once again to present our annual Social Responsibility Report. It highlights how our people execute our Guiding Principles in safety, environmental stewardship, community support, employee programs and corporate governance that serves all stakeholders.

In the aftermath of Hurricane Harvey, which tested many of our employees, communities and operations along the Texas Gulf Coast, I especially was proud to be part of Team Valero.

I was inspired by seeing our team work together to ensure all were safe and well cared for, even as they worked to safely maintain operations. This truly is a special culture – one in which people look out for one another, whether it's operating safely or helping our neighbors. These things go hand in hand.

In operations, we set new performance records for refinery employee safety, process safety and reliability, as well as environmental stewardship.

Our refineries recorded their lowest-ever employee injury rate – far lower than the industry average – and best-ever process safety event rate. At the same time, they achieved their highest-ever mechanical availability percentage, a key measure of reliability, and lowest-ever number of environmental incidents.

Valero once again was recognized as the top energy company for community support, named for the fourth consecutive time to the Civic 50, a listing of America's most community-minded companies by Points of Light.

We remain an employer of choice in the energy industry, with well-paying jobs, attractive benefits and an award-winning health and wellness program, and our operations provide substantial economic support to our communities.

And so, we strive to be "premier" in all that we do. As always, we hope you enjoy our report!

**Joe Gorder**  
Chairman, President and  
Chief Executive Officer

# valero's vision

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Valero will be the premier manufacturer, distributor and marketer of quality transportation fuels and petrochemical feedstocks, while serving the needs of our employees, communities and stakeholders.

## guiding principles:



### safety

Safety is our foundation for success.



### environment

We produce environmentally clean products and are committed stewards of the environment.



### community

We share our success with the communities where we live and work through volunteerism, charitable giving and the economic support of being a good employer.



### employees

We consider our employees a competitive advantage and our greatest asset. As such, we provide them with a safe and rewarding work environment with opportunities for growth and personal development.



### stakeholders

Our stakeholders are our partners to whom we pledge to deliver operational excellence, disciplined management of capital and long-term value.

## commitment to excellence management system (CTEMS)

Our Commitment To Excellence Management System (CTEMS) directs us in achieving our Guiding Principles. In driving operational excellence, CTEMS establishes a proprietary systematic approach to planning, executing, checking and acting to improve our everyday work activities across the entire company. It also further enhances our commitment to ensuring the health and safety of our employees and protecting the environment.

CTEMS has nine elements:

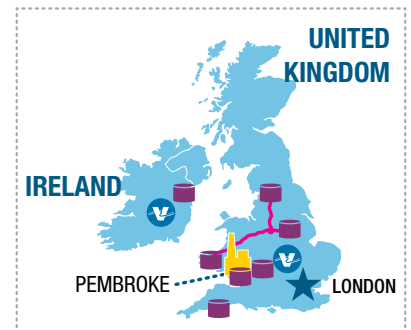
1. Leadership Accountability
2. Protecting People and Environment
3. People and Skills Development
4. Operations Reliability and Mechanical Integrity
5. Technical Excellence and Knowledge Management
6. Change Management
7. Business Competitiveness
8. External Stakeholder Relationships
9. Assurance and Review

Operational excellence means reliable and predictable operations, which make our facilities safer and more efficient. CTEMS has counted many successes, in areas ranging from change management to proper assessment of risk, fixed-equipment inspection and preventive maintenance. We will continue to assess existing programs against expectations defined in CTEMS.

# map of operations



- WHOLESALE MARKETING PRESENCE
- BRANDED WHOLESALE PRESENCE
- VALERO REFINERIES
- VALERO ETHANOL PLANTS
- VALERO TERMINALS
- ★ VALERO OFFICES
- DIAMOND GREEN DIESEL
- VALERO ENERGY PARTNERS ASSETS
- SUNRAY WIND
- PIPELINES



# going beyond compliance

## Refinery VPP Star Site Approvals



Ardmore



Benicia



Corpus Christi East



Corpus Christi West



Houston



Memphis



St. Charles



Texas City



Three Rivers



Wilmington



Pembroke\*



Québec\*

\*Non-U.S. refineries holding internal VPP Stars, after passing audits nearly identical to those in the U.S., conducted by teams of independent OSHA-trained inspectors.

Valero goes beyond regulatory compliance in voluntarily submitting to rigorous safety audits under the Voluntary Protection Program (VPP) of the U.S. Occupational Safety and Health Administration.

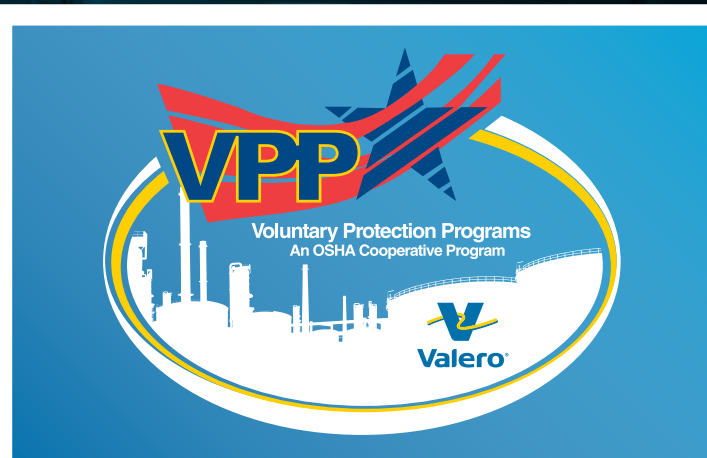
Facilities passing the audits, establishing that they have implemented continuous enhanced safety systems, are approved as “Star Sites,” the highest plant-safety recognition by OSHA and affiliated state agencies.

With approvals at Memphis and St. Charles in 2017, 10 U.S. Valero refineries are VPP Star Sites – the most of any refiner.

In addition, company refineries in Québec and Wales each hold internal Valero VPP Stars after passing audits nearly identical to those in the U.S., conducted by teams of independent OSHA-trained inspectors. Three Valero asphalt terminals also hold VPP Stars, as does the company’s aviation department.

### Memphis

The VPP Star at Memphis was years in the making, owing to the difficulty of obtaining it. In 2015, previous plant Vice



President and General Manager Mark Skobel held a “Signing Day” in which employees signed a banner pledging their intent to earn the Star.

At the 2017 award presentation, Skobel, who now holds the same position at the Port Arthur refinery, said the achievement was one of the most rewarding moments of his 40-year Valero career.

Employees were presented with what now has become a custom:



The Memphis refinery receives its Voluntary Protection Program Star Site designation, the highest plant-safety recognition by OSHA and affiliated state agencies.

Valero VPP football jerseys, customized with numbers corresponding to the year of their hiring and their names on the back, to mark the occasion. The jerseys represent the teamwork necessary to maintain a safe operation.

The Tennessee Department of Labor & Workforce Development, which administers the OSHA program at the state level, presented the honor known as the Volunteer STAR (Safety Through Accountability and Recognition) award, to current refinery Vice President and General Manager Josh Tulino.

### St. Charles

About a month later, new St. Charles refinery Vice President and General Manager Jerry Stumbo presided over another celebration, this one at an event location re-dubbed “Stumbeaux Stadium,” a nod to Cajun Louisiana.

As with Memphis, employees donned their customized Valero VPP jerseys and greeted guests from headquarters.

In addition to earning the VPP Star, employees had another feat to celebrate: The refinery had gone two-and-a-half years and 3 million work hours without a recordable injury.

### Re-approvals

The Corpus Christi East and West refineries earned re-approvals as VPP Star Sites early in the year.

The Benicia refinery celebrated its re-approval as a Star Site in the California Occupational Safety & Health Administration’s (Cal/OSHA) Voluntary Protection Program (VPP), which like in Tennessee is an initiative tied to the federal OSHA VPP.

The refinery previously had completed more than three years and more than 4 million work hours without an injury of any kind – a company record.



U.S. VPP Star Sites,  
the most of any refiner



Work hours and two-and-a-half years without a recordable injury for the St. Charles refinery



Victor Torres, Manager-Complex, and Pamela Jackson, Manager-Complex, are part of a focused effort on safety and reliability that earned a VPP Star at Memphis.

# helping communities recover



Rescue boats float on a flooded street in front of a Valero-branded station in Houston as people are evacuated from rising floodwaters brought on by the aftermath of Hurricane Harvey.



Valero Post Hurricane Assistance Team (PHAT) members cut fallen trees off the roofs of damaged homes.

Whether making personal sacrifices to maintain critical fuel supplies, providing food, water and free gasoline to relief workers and first responders, or cutting massive fallen trees off of homes and patching roofs, Valero and its employees worked to reclaim their communities following natural disasters in 2017.

Employees at our refineries and terminals worked to protect a key fuel artery that's the lifeblood of communities in the nation's heartland, even as their own homes were being

impacted from high winds or flooding from Hurricane Harvey. In all, the hurricane would touch operations at six of Valero's refineries as well as terminals.

Shortly after the storm made landfall on Aug. 25, Valero's post-hurricane relief teams came to the aid of employees and communities in the Corpus Christi and Three Rivers areas, with food, lodging and other personal needs, and assisted others with repairs and debris removal.

As Harvey moved up the coast and dumped more than 50 inches of rain on the Houston, Beaumont and Port Arthur areas, our recovery teams followed, helping residents clean out and haul debris from their homes, and providing dry blankets and sheets to women's and children's shelters ravaged by flooding.

Valero's disaster recovery efforts in 2017 would extend





Valero volunteers helped pull out debris from flooded homes in Port Arthur.

far beyond the Gulf Coast, as we additionally provided aid to victims of Hurricane Irma in Puerto Rico, as well as those of the Mexico earthquake and California wildfires.

Joe Gorder, Valero Chairman, President and Chief Executive Officer, called the efforts a “strong demonstration of the unique culture we are all a part of.”

### Hurricane Harvey

Gorder announced a \$1 million contribution from Valero to the general Hurricane Harvey relief fund of the American Red Cross, which coordinated logistics for shelters, and provided transportation, food, cots, blankets and other assistance.

On its own, Valero mobilized facility ride-out crews and aided both employees and the broader community reeling from the storm.

At the storm’s peak, Jody Lambright, Manager-Area Pipelines & Terminals, stayed in his truck at night at the El Vista terminal near Port Arthur to make sure a storm-water pump worked properly to prevent catastrophic flooding of a fuel tank farm. El Vista stores refined products destined for markets throughout the region and beyond.

Lambright and Senior Terminal Operator Eric Chapman, cut off from their own homes by flooding, worked around the clock for six days to monitor operations at the El Vista and Lucas terminals, the latter a major crude-oil storage facility.

A company call center, staffed 24 hours a day, fielded calls from employees up and down the coast, and coordinated with human resources teams at each location, as well as with supply-chain, security and safety personnel, and with



Contribution from Valero to the general Hurricane Harvey relief fund of the American Red Cross

“I’m just very, very thankful to work for such a great company. I was just overwhelmed.”

- Kelli Coates

Process Safety Engineer, Corpus Christi, as volunteers removed a giant oak that had fallen on her home



Valero provided thousands of gallons of free fuel to aid cleanup efforts along the Texas coast.

**\$2.9+**  
million

In company gifts to 2,800 employees directly affected by Hurricane Harvey for imminent needs

**\$1.3+**  
million

For 157 “Safe Fund” grants from the Valero Energy Foundation to employees for longer-term disaster recovery

Valero’s volunteer Post Hurricane Assistance Team (PHAT).

PHAT spent its first days in the Corpus Christi area, primarily repairing roofs and cutting trees off of houses. PHAT responded to and completed 179 requests by employees for home repairs, debris removal and cleanup. The call center took a total of 1,042 calls, and the company provided temporary lodging to 260 employees and their families, and 255 generators to those without power.

But aid provided to our neighbors also was significant.

Valero provided 4,000 gallons of free fuel for about 800 residents of Refugio, Tivoli, Bayside, Woodsboro, Gregory and Bloomington near Corpus Christi, to supply their generators and cleanup efforts. Another \$1,700 in fuel cards went to first-responders and volunteer organizations focused on relief efforts.

**4,000 gallons** of free fuel for **800 residents** for generators and cleanup efforts

We supplied 10 pallets of water, or about 880 cases, to the communities of Tivoli and Austwell.



A Texas highway patrol car refuels on Valero gas, as part of hurricane relief efforts in Tivoli on the Texas Gulf Coast.

The Three Rivers Volunteer Council helped cook 700 pounds of fajita meat to feed 2,000 residents, linemen, first-responders and relief workers on Labor Day weekend, partnering with Hogan Homes, TEAM Inc. and Sam Kane Meats.

Up the coast, Valero delivered hundreds of meals to Catholic Charities Hospitality Center in the Beaumont-Port Arthur area, serving the homeless and other underserved individuals.



collected at a 2017 headquarters drive were directed to shelters for displaced families in **Corpus Christi, Houston and San Antonio**

We provided lunches to chaplains at St. Elizabeth Catholic Church in the area, as well as other food supplies and drinks to the United Steel Workers Union. Blankets and sheets went to



Volunteers mobilize in force to move tin roofing mangled by hurricane winds near Corpus Christi.



The Valero Energy Foundation donated \$100,000 to the Salvation Army in Puerto Rico for food distribution efforts such as this one in the aftermath of Hurricane Irma.

Family Services Women's and Children's Shelter in Beaumont-Port Arthur, and bundles of towels were donated to the Southeast Texas Humane Society.

Nearly a quarter of a million diapers collected at a 2017 headquarters drive were sent to shelters for displaced families in Corpus Christi, Houston and San Antonio.

Many other employees responded individually with donations to Red Cross and other agencies including the San Antonio Food Bank, Salvation Army, United Way, South Texas Blood & Tissue Center and Animal Defense League of Texas.

The Valero Energy Foundation, Valero's philanthropic arm, also announced \$250,000 in aid to the Devereux Advanced

Behavioral Health Texas facility in League City, Texas, where 88 young people ages 11 to 22 in its residential treatment program were evacuated as flood waters rushed into the dorms. The center for youth with severe emotional and behavioral challenges sustained about \$2 million in out-of-pocket damages.

The foundation additionally donated \$25,000 to the Southeast Texas Emergency Relief Fund to cover needs of teachers, faculty and local school leaders affected by the hurricane, as well as those of special-needs children who lost equipment and supplies.

#### **Other disaster aid**

Valero's foundation donated \$100,000 to the Salvation Army for relief efforts from Hurricane

Irma in Puerto Rico, which included food distribution and volunteer efforts to remove fallen trees and other debris.

When Mexico's catastrophic earthquake hit in September 2017, striking greater Mexico City and the states of Puebla and Morelos, our foundation responded with a contribution of \$1 million that went toward emergency medical response and aid to those who were displaced from their homes.

And as wildfires raged in the Napa region of California, the foundation reached out with \$100,000 in assistance to aid community-based nonprofit agencies serving immediate needs. In addition, Valero employees took part in volunteer efforts to help fight the fires and provide relief.

# sustaining our operations



Valero's wind turbines at the McKee refinery in the Texas Panhandle generate electricity for the facility.

Valero has made major capital investments in its operations that improve environmental performance – from renewable diesel to installation of cogeneration and flare-gas recovery systems, and even wind energy that powers a refinery.

## Diamond Green Diesel

Diamond Green Diesel, a joint venture of Valero subsidiary Diamond Alternative Energy LLC and Darling Ingredients Inc., is expanding the capacity of its plant at Norco, Louisiana,

producing renewable diesel fuel from animal fats, used cooking oil and corn oil.

The product meets the most stringent of emission standards. In fact, it's practically carbon-neutral. And renewable diesel is not susceptible to freezing temperatures and separation during storage, and can be transported through traditional diesel pipelines.

Renewable diesel is chemically identical to petroleum diesel, but with the environmental benefits that come from being



Diamond Green Diesel is boosting its capacity to produce renewable diesel fuel from discarded animal fats, used cooking oil and inedible corn oil.

produced from renewable products such as recycled cooking oil from restaurants, out-of-date foods and meats from grocery stores and inedible corn oil from Valero's ethanol plants.

Also, Diamond Green Diesel not only helps eliminate waste by turning it into a viable product but recycles its own waste, which relieves landfills.



Memphis Associate Environmental Engineer Victoria Croft works in front of the refinery's flare-gas recovery unit that captures and recycles gases that otherwise would be flared.

The plant is boosting its annual production capacity from 160 million gallons to 275 million gallons, which may rise to an eventual 550 million gallons. Companies such as UPS and Boeing have used renewable diesel fuel, as has a major theme park for its bus fleet.

### Cogeneration

Valero has invested in cogeneration systems that produce both electricity and thermal energy, or steam. These systems represent a more efficient way of making power, as well as steam that is recycled back into the refining process for other uses.

The new cogeneration system completed in 2017 at Valero's Wilmington refinery is fueled by clean natural gas and produces approximately 31 megawatts of electricity that no longer needs to be supplied by the local power grid.

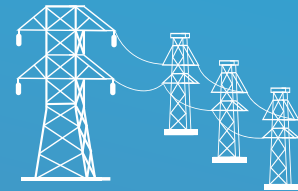
Cogeneration at Wilmington also plays a role in helping reduce greenhouse-gas and other emissions. The new system provides much of the power and steam the refinery uses, and other needs can be supplied by excess solar power from a local authority.

Also, using natural gas to make power cuts greenhouse gases by reducing the local authority's need for less-efficient generation. The natural gas is used to more efficiently make power and steam, together, for the refinery. Overall, cogeneration improves the refinery's energy efficiency.

Aside from Wilmington, Valero also has cogeneration systems at its Benicia and Port Arthur refineries, with others in development.

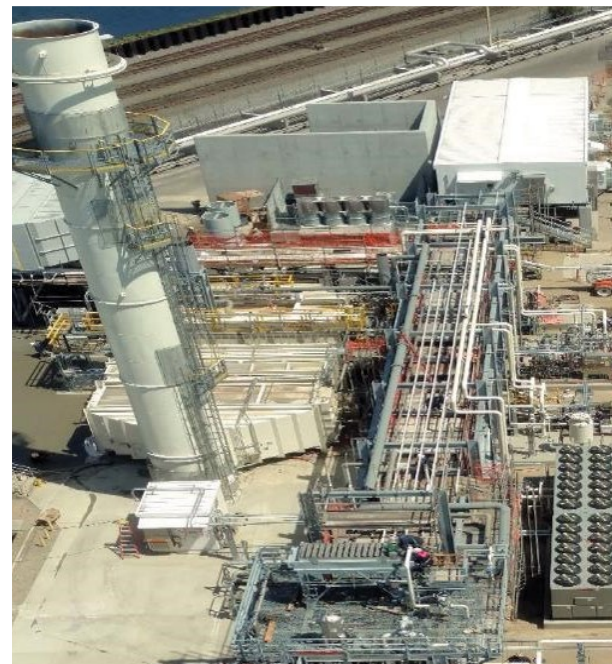


Megawatts of electricity that no longer needs to be supplied by the Los Angeles power grid, due to cogeneration,



enough to power

**62,000 homes**



The new cogeneration unit at the Wilmington refinery efficiently produces electricity, as well as steam that is recycled back into the refining process.



Of the electricity used at Valero's Jean Gaulin refinery comes from renewable sources – mainly hydropower, with small portions of power from wind, biomass and biogas



Wind turbines built by Valero that supply its McKee refinery

### Energy stewardship program

Since its inception in 2007, the company's comprehensive Energy Stewardship Program has sharply focused on improvements in process operations, in areas such as distillation, heat recovery, steam and power optimization, and fired heaters, to boost overall efficiency.

The program is an ongoing process that continually identifies opportunities, works to implement new ideas and monitors results.

In addition, more than 99 percent of the electricity used at Valero's Jean Gaulin refinery comes from renewable sources – mainly hydropower, with small portions of power from wind, biomass and biogas. Québec's hydroelectric power plants produce electricity with very low emissions and no harmful waste.

Despite Québec's long and very cold winters, Jean Gaulin has the smallest power-consumption carbon footprint of any Valero refinery.

### Flare-gas recovery/flare reduction

Flares are used to safely combust gases that otherwise would be emitted during outages and other events.

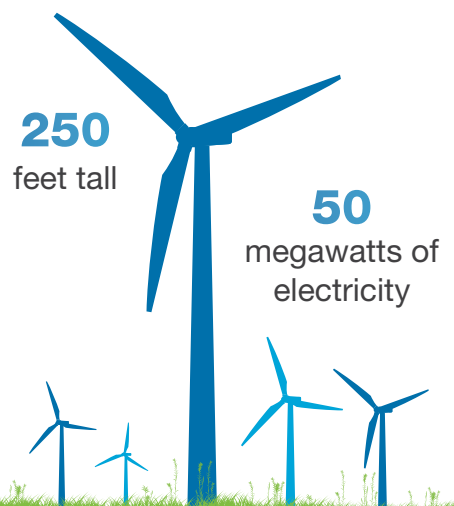
However, Valero has taken aggressive steps to reduce the need for flaring to begin with, by working to avoid outages and improving reliability.

Additionally, Valero has implemented a companywide flaring reduction initiative that includes the installation of flare-gas measurement and recovery systems, flare-flow meters and sulfur analyzers on the majority of its flares. Valero is able to reuse the recovered gas for energy.

### Wind turbines

Through a division called Sunray Wind, Valero built 33 wind turbines next to its McKee refinery outside the town of Sunray, about 40 miles north of Amarillo, Texas, that actually help power the refinery.

In so doing, it reduces the refinery's dependence on energy produced from conventional power plants,



The flare-gas recovery unit at the Corpus Christi West refinery is part of Valero's companywide flaring reduction initiative.



Jacque Nowicki is Manager-QA/QC Lab at Valero's Welcome, Minnesota, ethanol plant, one of several company facilities approved under EPA's Efficient Producer Program.

which release thousands of tons of air emissions and consume millions of gallons of water each year.

The wind turbines, each 250 feet tall, have the ability to produce 50 megawatts of electricity and are capable of running the entire McKee refinery under optimum wind conditions. And what doesn't go to the refinery goes to a local utility.

### **Ethanol business**

Valero's ethanol plants are some of the most energy-efficient in the industry and have demonstrated this through the U.S. Environmental Protection Agency's Efficient Producer Program.

Under this program, EPA developed the Efficient Producer process for ethanol plants that "demonstrate superior process efficiency" through reduced on-site energy consumption and/or increased ethanol production to reduce on-site greenhouse-gas emissions.

To qualify for this program, an ethanol plant must submit a petition to EPA with plant operating data that shows it has historically met the greenhouse-gas emission reduction targets. Once approved by EPA, the plant must continue to track and report on the required parameters to demonstrate ongoing compliance with the greenhouse-gas emission reductions.

To date, Valero ethanol plants at Albion, Bloomington, Charles City, Hartley, Linden and Welcome have received approval and demonstrated ongoing compliance with this Efficient Producer process. In addition, Valero ethanol plants in Albert City, Aurora and Fort Dodge have begun the petition process and are expected to be finalized in 2018.

### **Other efforts**

Valero refineries recover usable oil from waste materials and reprocess oily solids through a method called coker injection, transforming them into a high-value fuel. This process avoids the generation and disposal of hazardous wastes.

We additionally recycle millions of pounds of spent refining catalyst material that otherwise would be disposed in landfills. The recovered metals are regenerated for use as catalyst by other manufacturers.

Valero also continues to seek opportunities to use treated domestic wastewater for refinery use or to help develop other water supply projects with municipalities, potentially saving billions of gallons of fresh water each year for other community and residential uses.

# stewarding the environment



Jean Gaulin refinery environmental employees François Gagnon and Geneviève Côté participate in an ecological restoration program of fallow woodland at adjacent L'Abbaye Valero, where 11,250 trees have been planted since 2014.

Valero's employees participate in a variety of environmental stewardship efforts, from restoring woodlands and wetlands to helping create habitat for sensitive species. Here are some noteworthy examples from 2017:

## **Etchemin River Park, Québec**

The Jean Gaulin refinery in collaboration with the city of Lévis in Québec celebrated the start of a new urban development project located along the St. Lawrence River, continuing Valero's vision

of an expansive greenbelt that enhances the natural environment between the refinery and residential neighborhoods.

The refinery donated 403 acres for Etchemin River Park (Parc de la Rivière Etchemin) that will include a multi-purpose pathway for summer and winter activities, a gazebo, rest areas and a 5.1-kilometer multi-functional cycling trail that will link to other parts of the city.

Valero served on a steering committee for the park, which will be developed with financial



Marina Binotto, Manager-Public and Governmental Affairs, and daughter Eva Binotto-Carbonneau volunteer at L'Abbaye Valero.

backing from multiple partners along with the support of many local businesses.

Valero previously acquired other parkland as part of the greenbelt around the refinery. These parks include Valero Differences Park (Parc Valero Les Écart), Park of the Pier





A tutor gives a presentation to school children at the marshland boardwalks of Valero's Environmental and Community Centre on the Pembroke refinery estate in Wales.

(Parc de la Jetée) and Golf of the Auberivière (Golf de l'Auberivière).

Also, Valero employees, along with the Association of Two Banks, planted 2,250 trees in the fourth year of an ecological restoration program of fallow woodland at L'Abbaye Valero, close to the refinery. Since 2014, 11,250 trees have been planted under this project.

**Valero Environmental School Project, Pembroke**

The Pembroke refinery's primary school environmental project introduces hundreds of school children to Pembrokeshire's abundant natural wildlife every year, at Valero's dedicated Environmental and Community Centre at the deconsecrated St. Mary's Church on the refinery estate.

The building was converted into an environmental facility by the

refinery several years ago, and is fully stocked with equipment for the schools to use.

In 2017, primary schools from across Pembrokeshire took part in activities on the center's marshland boardwalks, including "pond-dipping" with nets to identify aquatic species and exploring the surrounding woodland.

In other activities, Pembroke volunteers conducted a number of beach cleanup events at locations close to the refinery inside the Pembrokeshire Coast National Park.

And the refinery continues efforts to create and sustain habitat for wildlife and plants, including work with the "Bumblebee Conservation Trust" to create habitat for the rare Shril Carder Bee at a terminal tank storage area at Kilpaison.



Acres donated by Jean Gaulin refinery for new park



Trees planted in the fourth year of an ecological restoration program of fallow woodland at L'Abbaye Valero



The deconsecrated St. Mary's Church on the Pembroke refinery estate is now a dedicated environmental and community center building.

“Valero has been a great partner. We appreciate all the support they provide and we enjoy working alongside them to restore this important line of defense. The volunteers are some of the most hardworking we get and they plant amazingly fast!”

- Dr. Theryn Henkel  
Assistant Director, Lake  
Pontchartrain Basin  
Foundation

### Maurepas Land Bridge tree-planting, St. Charles

St. Charles refinery partnered with the Lake Pontchartrain Basin Foundation to plant 750 swamp trees on the Maurepas Land Bridge, which separates the large lake from Lake Maurepas, north of New Orleans.

This was the third year that the refinery provided financial support and volunteers to help restore the land bridge that plays a critical role in reducing risk of storm surge for East Baton Rouge communities and communities along the river such as Laplace, Garyville and Reserve.

The land bridge also protects communities around Lake Maurepas, such as Ponchatoula, Hammond and Springfield.

The area was covered in swamp until logging in the late 1800s and early 1900s. Populations of nutria, an invasive rodent introduced to the region by fur farmers, spread and ate away the bottom of plants that hold coastal wetlands together, preventing natural regeneration. Also, saltwater intrusion, subsidence and leveeing of the Mississippi River prevented pulses of freshwater, nutrients and sediment from reaching the area.

“Valero has been a great partner,” said Dr. Theryn Henkel, Assistant Director

of the foundation’s Coastal Sustainability Program. “We appreciate all the support they provide and we enjoy working alongside them to restore this important line of defense. The volunteers are some of the most hardworking we get and they plant amazingly fast!”



**750**  
swamp trees  
planted on the  
Maurepas Land  
Bridge

### Cleanup events, Wilmington

Valero’s Wilmington employees regularly participate in a cleanup on the third Tuesday of each month at locations chosen by local neighbors and a nonprofit, South Bay Center for Counseling. Volunteers have conducted cleanup efforts at the El Dorado Nature Center, a natural habitat along the San Gabriel River in Long Beach, California, that includes dirt trails, two lakes and a stream.

Employees visit the nearby Golden Shore Marine Reserve along the Los Angeles River quarterly, to participate in cleanup and other activities to help preserve the bird and aquatic life sanctuary.

On Earth Day, Valero employees and family members picked up tons of trash and cleared out debris on the Belmont Veterans Memorial Pier in Long Beach.



St. Charles volunteers plant swamp trees on Maurepas Land Bridge, in partnership with the Lake Pontchartrain Basin Foundation.



Benicia volunteers make their way toward a tree-planting project in the recreation areas of Lake Hermann Open Space.

Other local efforts included beautification projects at the U.S. Vets Villages at Cabrillo, LA Harbor YWCA and other Wilmington gathering areas, where volunteers painted murals, removed large bulky items and trash, applied fresh paint and planted vegetation.

### **Coastal Bays and Estuaries, Corpus Christi**

A group of Valero Corpus Christi volunteers worked at the Nueces Delta Preserve and helped build two native “grow tables” and dug a trench for the irrigation system to the tables.

The 16-foot-by-4-foot tables will be used by volunteers with the Coastal Bend Bays and Estuaries program to begin propagating native plants at

the preserve. The plants then will be transplanted on rookery islands in the area bays.

The end goal is to begin developing a native plant source that will be used in habitat restoration efforts on rookery islands that were impacted by Hurricane Harvey.

### **Benicia Tree Foundation, Benicia**

Benicia refinery volunteers partner with the Benicia Tree Foundation to plant trees in the city’s open space property between Community Park and Lake Herman Regional Park.

The employees have assisted in planting buckeye seeds and oak acorns, built rabbit fences around saplings, and trenched, watered and catalogued the

saplings to track growth and survival rates. They began volunteering in 2016, and in 2017 started scheduling quarterly events with the tree foundation.



Dom Toledo, a Staff Instrument Engineer at Benicia, inspects a sapling as part of a project with the Benicia Tree Foundation.

# serving our communities



Valero Volunteers join new homeowners and a representative of Habitat for Humanity of San Antonio at the completion of the city's 1,000th Habitat home, and the 10th sponsored by the Valero Energy Foundation.



New Habitat homeowner Reyna Guevara (left) and daughter Raelyn hug outside their new house.

## THE CIVIC 50

For a fourth consecutive time, Valero made the list of America's 50 most community-minded major companies, The Civic 50 – and scored tops among energy-sector companies.

The list is an annual initiative of Points of Light, the world's largest organization dedicated to volunteer service, recognizing companies for their

commitment to improve the quality of life in communities where they do business.

There's a good reason why Valero is the leading energy company for community service, as demonstrated through four broad areas of support.

### Education

- In 2017, the Valero Energy Foundation awarded a landmark five-year, \$8.4 million grant to the San Antonio Independent School District for a program

focused on increasing the number of students who apply for, get accepted to and stay in college.

The grant goes to the SAISD Foundation to fund the district's "Pipeline for College Success" program, a one-of-a-kind initiative in San Antonio and first for Texas.



The Valero Energy Foundation's landmark five-year, \$8.4 million grant to the San Antonio Independent School District's "Pipeline for College Success Program" aims to ensure more students apply for, get accepted to and stay in college.

The program is an extension of a concept Valero has supported since 2004 with KIPP charter schools, which is collaborating with SAISD in its effort.

SAISD's goal is to ensure that even more of its students have exposure to college campuses prior to applying, and that those who are accepted enroll and have the district's support through that critical first year of college and through graduation.

- As part of Valero's drive to inspire young engineers and build a qualified talent pool for the future, the company also donated \$6.25 million to five universities to build engineering facilities, such as labs and lecture halls.

The company donated \$1.5 million each to Texas A&M University and University of Oklahoma, \$1.25 million to Oklahoma State University

and \$1 million each to Louisiana State University and Texas Tech University.

- To encourage more young women to take up engineering careers, the Pembroke refinery in Wales hosted a two-day program in science, technology, engineering and math (STEM), attracting 50 female students from local schools, in conjunction with local job-skills groups and supporters. The participants took part in interactive STEM demonstrations with some of Valero's apprentices, operators and engineers.
- Our Canadian operations announced two major commitments aimed at helping young people stay in school: a \$315,000 commitment to Éducaide, an educational assistance fund that offers scholarships to secondary school students; and a three-year, \$300,000

**\$8.4 million**

Grant awarded by the Valero Energy Foundation to the SAISD Foundation to fund the district's "Pipeline for College Success" program

**\$6.5 million**

Donated by Valero to five universities to build engineering facilities, such as labs and lecture halls



Pembroke refinery's Karen Muehlbauer, Director-Environment and Safety, welcomes students to a program designed to encourage more young women to take up careers in science, technology, engineering and math (STEM).



Gift presented to the San Antonio Zoo to fund educational initiatives, and enable more children from under-privileged school districts to attend field trips



Hours donated by Valero volunteers at headquarters to build the 1,000th Habitat home in San Antonio

donation to Ali et les Princes de la rue, an organization in Eastern Montreal that helps at-risk youth.

- Valero presented the San Antonio Zoo with a \$3 million gift to fund educational initiatives, and enable more children from under-privileged school districts to attend field trips.
- Across the company, various locations participated in back-to-school drives, like Houston, which provided students in the Manchester community with school supplies and backpacks. Other sites provided mentoring, such as Port Arthur’s partnership with Booker T. Washington Elementary in an accelerated reading program.

levels within their departments and throughout the corporate office to help build the home.

- The Benicia refinery contributed \$20,000 and many volunteer hours toward construction of a Solano-Napa Habitat project in the neighboring town of Vallejo.
- Summer interns at the McKee refinery teamed up with employees of the Valero Payment Service Center to install walls for a new Habitat home in Amarillo.
- St. Charles employees sponsored a food drive for Second Harvest Food Bank of Greater New Orleans and Acadiana, which serves 23 parishes. Valero volunteers “stuffed the truck” at the Valero warehouse and assembled Thanksgiving boxes at the food bank.

In all, the employees donated 33,153 pounds of food, providing for more than 27,000 meals. Additionally, 43 employees who volunteered at the food bank were able to assemble contents of 6,000 backpacks filled with nutritional food and beverages for needy children.

### Basic Needs

Several Valero locations held Habitat for Humanity builds and food or diaper drives in 2017, as well as Day of Caring events to aid United Way agencies providing for basic needs in our communities.

- Valero volunteers at headquarters donated 1,573 hours to build the 1,000th Habitat home in San Antonio, and the company’s 10th in the city. Executives adopted Saturdays over an eight-week schedule, and recruited employees from all

- Down the road, Meraux refinery employees donated \$7,400 worth of food, and packaged and served 300 Thanksgiving meals to families registered with a local pantry at the First Baptist Church.



Jen Swenton, Manager-Process Engineering at the Valero Ardmore Refinery, visits with University of Oklahoma students visiting the refinery.



Valero donated a total of \$6.25 million to five universities, including this \$1.5 million contribution to the University of Oklahoma to build engineering facilities, such as labs and lecture halls.

- In Québec, a team of 78 volunteers went to Montréal's food bank, Moisson Montréal, to sort, rewrap, package and prepare foodstuffs to be distributed to the city's residents in need.
- Albert City collected a total of 4,325 pounds of food for three surrounding communities, through its spring food drive and a fall United Way Month of Caring event. Corpus Christi employees and interns volunteered once a month to help sort food at the Coastal Bend Food Bank.
- At headquarters, another year of successful food and diaper drives was highlighted by a donation of \$150,000 for the purchase of a refrigerated truck for the San Antonio Food Bank, and \$50,000 for a box truck for the Texas Diaper Bank.

### Health Care

In San Antonio, the Valero Energy Foundation donated \$2 million for a campus for ChildSafe, a child-abuse prevention nonprofit organization. Another \$320,000 was provided to the South Texas Blood & Tissue Center for the purchase of a new bloodmobile.

The foundation also announced a \$1 million donation to Christus Health Care for a clinic in Houston that will provide low-cost health care for the adjacent Manchester neighborhood.

Valero's wholesale marketing organization donated \$20,000 to the Arkansas Children's Hospital in Little Rock, and participated in a Day of Caring volunteer event to beautify the facility's patient basketball court and outdoor therapy area. Valero's Hartley ethanol plant provided \$20,000 toward purchase of an ambulance serving the local community in Iowa.

### Civic

Valero continued to contribute to civic, cultural and arts programs throughout the company in 2017.

For example, in Canada, Valero helped raise \$128,000 to support access to the arts and music for underserved children and adolescents, through first-ever participation in a unique paddling event on the St. Lawrence River called Défi Kayak Desgagnés 2017.

The Pembroke refinery continued its partnership with the Royal Welsh College of Music & Drama, which has given young people from the area the opportunity to learn skills they need to enter the United Kingdom's top drama schools.

The annual Valero Kid Fest in Port Arthur celebrated its biggest year yet, attracting 4,000 for free family-friendly entertainment and educational activities for the city's youth.

# safety

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Jeff Seier is Plant Manager of Valero's Hartley ethanol plant, which hasn't had a Tier 1 process safety event in more than six years.

**Safety is our foundation for success.**



## occupational safety

We track employee and contractor safety-event rates by total incidents recorded per 200,000 working hours, known as the Total Recordable Incidence Rate, or TRIR.

In 2017, Valero recorded its lowest-ever refinery employee TRIR of 0.28, well below the industry average for refinery employees of about 0.6, and a 20 percent drop from the previous year. Our combined refinery employee and contractor rate stood at 0.32.

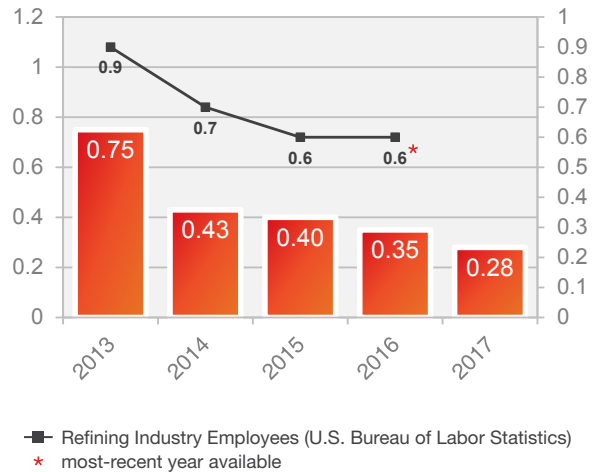
**20%** ↓ reduction in TRIR since 2016

Our St. Charles refinery went two years without an employee recordable injury, and posted a three-year contractor incidence rate of 0.24, earning the Valero Chairman's Safety Award.

Valero's Wilmington refinery received an Elite Silver Safety Award from American Fuel & Petrochemical Manufacturers, the industry's major trade association, recognizing the top 5 percent of member company refineries that have exhibited excellent industry safety performance and program innovation.

### Refinery Employee TRIR

(Total Recordable Incidence Rate per 200,000 working hours, employees)



Wilmington joined other Valero refineries, including Benicia, Memphis and Meraux, in also receiving a Safety Achievement Award from AFPM, judged on a range of occupational and process safety indicators.

The results reflect Valero's leading safety and health indicators program that uses proactive and predictive measures to avoid incidents. These include timely completion of safety work orders, safety-related action items and incident investigations.

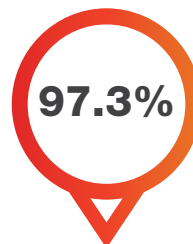
## safety quick stats



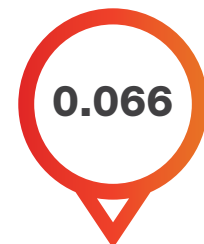
Company record-low refinery employee TRIR



Combined employee and contractor TRIR



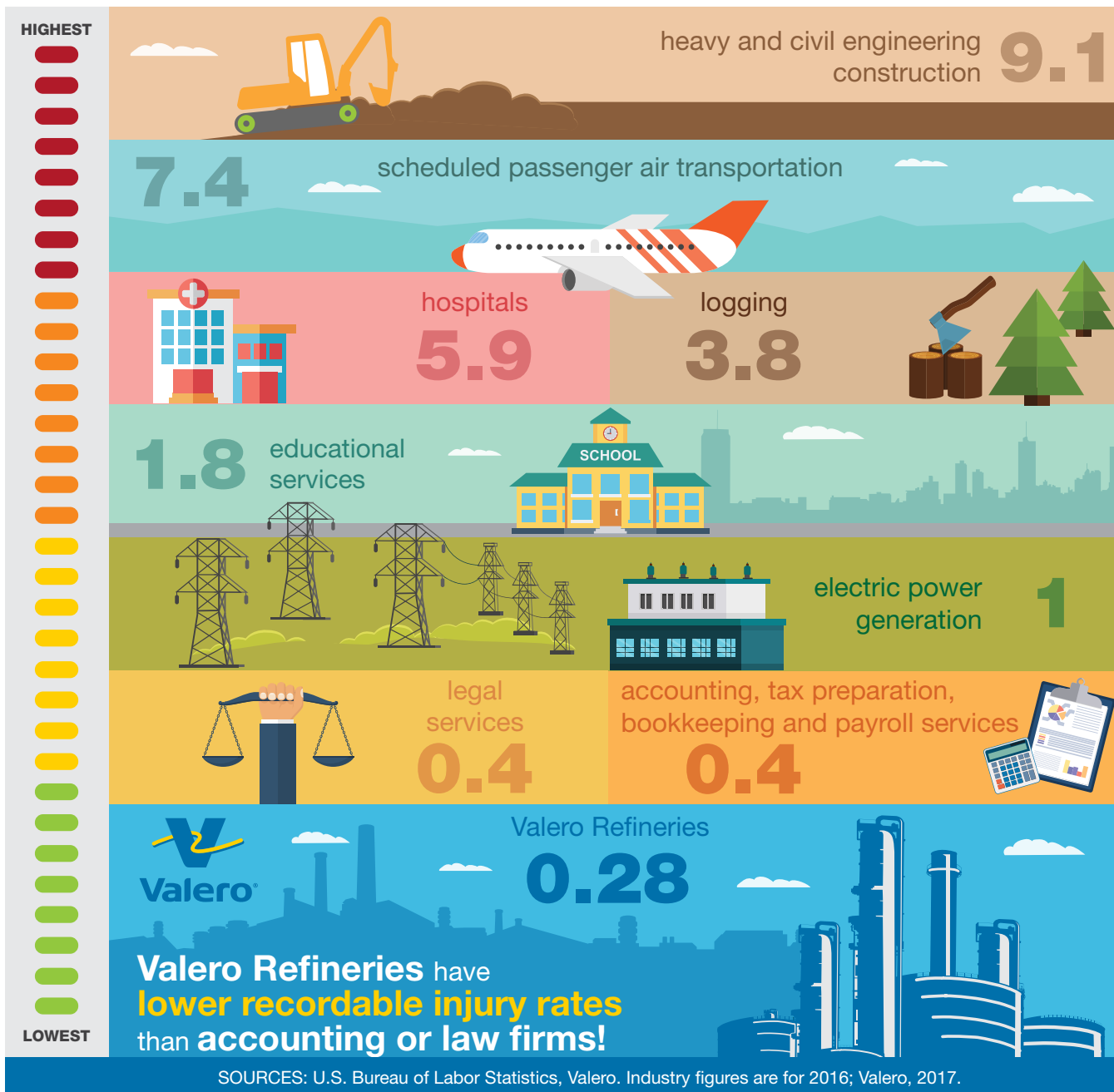
Mechanical availability, which is the highest company percentage ever recorded



Lowest-ever, three-year rolling average of PSE Tier 1 events per 200,000 work hours

# Safety Incidence Rates by Industry Sector

Injuries recorded per 200,000 working hours, Total Recordable Incidence Rate



**Heavy and civil engineering construction** – water and sewer line and related structures; oil and gas pipeline and related structures; power and communication line and related structures; land subdivision; highway, street and bridge; and other heavy and civil engineering construction.

**Scheduled passenger air transportation** – passenger and freight transportation over regular routes and schedules, including also commuter and helicopter carriers (except scenic and sightseeing).

**Hospitals** – general medical and surgical, psychiatric and substance abuse, and specialty hospitals.

**Logging** – timber cutting and transportation.

**Educational services** – schools, colleges, universities and training centers.

**Electric power generation** – hydroelectric and fossil fuel, nuclear, solar, wind, geothermal, biomass and other electric power generation.

**Legal services** – offices of lawyers, title abstract and settlement offices and all other legal services.

**Accounting, tax preparation, bookkeeping and payroll services** – offices of Certified Public Accountants and tax preparation, payroll and other accounting services.

Further, job safety audits and observations help to reinforce an open environment in which everyone looks out for one another in a theme of continuous improvement.

Valero's safety efforts extend to all parts of the business. The company's ethanol plants continue their emphasis on safety programs, and have been below the industry average injury rate in each year of operation.

Efforts by a new Headquarters Safety Excellence Committee helped reduce the incident rate at the corporate office to a record-low 0.11, a more than 50 percent drop from the year earlier.



Jimmy White, Assistant Operator, on his rounds at the Memphis refinery.

## process safety and reliability

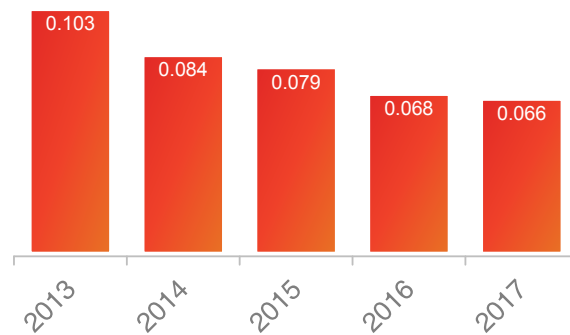
Valero refineries continue to make significant strides in key areas of process safety and reliability. In 2017, we recorded our best-ever Process Safety Event Tier 1 performance, the industry's primary process safety metric, and record-high refinery mechanical availability, a leading reliability measure.

Our comprehensive reliability assessments directly support process safety improvements by reviewing equipment and management systems to ensure Valero's practices are strong and effective.

These assessments clearly define expectations that result in highly effective programs for systemwide sharing and identify areas of opportunity for focused improvement.

### Process Safety Event Rates

(Three-year rolling averages of PSE Tier 1\* events per 200,000 work hours)



\*Tier 1, as defined within American Petroleum Institute Recommended Practice 754

### Process Safety

Valero achieves process safety excellence through its focus on safe, stable and reliable operations. Our proprietary management systems allow us to consistently deliver predictable and desirable operating results, and those systems go through a continuous improvement process that ensures we maintain industry-leading performance.

Our focus on quality incident investigations allows us to increase the understanding of the technical or program issues that contribute to the cause of

an incident. This drives our focused improvement efforts in key areas such as management systems and work practices to prevent similar incidents from recurring.

In 2017, we recorded our lowest-ever three-year rolling average of PSE Tier 1 events per 200,000 work hours – 0.066, a 71 percent improvement from 2010, the year our industry began tracking the metric.

**71% ↓**  
reduction in PSE Tier 1  
events per 200,000 hours  
worked from 2010

Valero's entire fleet of 11 ethanol plants recorded no Tier 1 process safety events for three years. The Hartley plant, winner of the Valero Chairman's Award for Renewables Plant Excellence, has not recorded a Tier 1 process safety event in more than six years.

### Reliability Programs

There has been measurable improvement in overall reliability of Valero's refineries. Beginning in 2009, Valero's reliability technical networks developed and implemented comprehensive proprietary assessments that identify opportunities to further improve safety and reliability performance.

The Electrical Safety and Reliability Network (ESARN) and Materials and Inspection Network (MAIN) initially rolled out reliability assessments. The Process Automation and Control Effectiveness Network (PACE) and Rotating Equipment Reliability Network (ROTO) followed in 2014.

Since the initial rollout, Valero has significantly reduced the number of unplanned refinery outages. In 2017, Valero refineries achieved 97.3 percent mechanical availability, which is Valero's best performance ever.

The Jean Gaulin Refinery in Québec won the Valero Chairman's Award for reliability, tops across a broad set of measures focused on equipment reliability, frequency and extent of shutdowns, and overall turnaround management.



Matt Wilson, Assistant Operator, inspects piping at the Memphis refinery.

## Fort Dodge Fire Department Puts Valero Donation to Good Use

A 90,000-bushel grain bin owned by a small agribusiness collapsed in the center of Breda, Iowa, in 2017, hitting a liquid propane line on the way down, threatening a massive leak that could have choked access to the community – or worse.

But a new propane response kit donated by Valero's Fort Dodge ethanol plant averted potential disaster. Responders used the kit to relieve pressure in the damaged line, allowing the fuel to pass to a flare so that it could be burned off safely.

"This tank had approximately 800 gallons of liquid propane gas and would have leaked for days if not for us having the capabilities to mitigate the leak with the kit," said Tim Ubben, Region V Hazmat Coordinator in Iowa.

Valero decided to donate the kit after plant employees participated in a quarterly emergency planning meeting with the Fort Dodge Fire Department.

"For Valero, safety is a top priority for both our employees and the community around us," said Plant Manager Troy Shaner. "When we think about a

fire department like Fort Dodge, it's important to see that they have what they need because our employees also live in these communities."

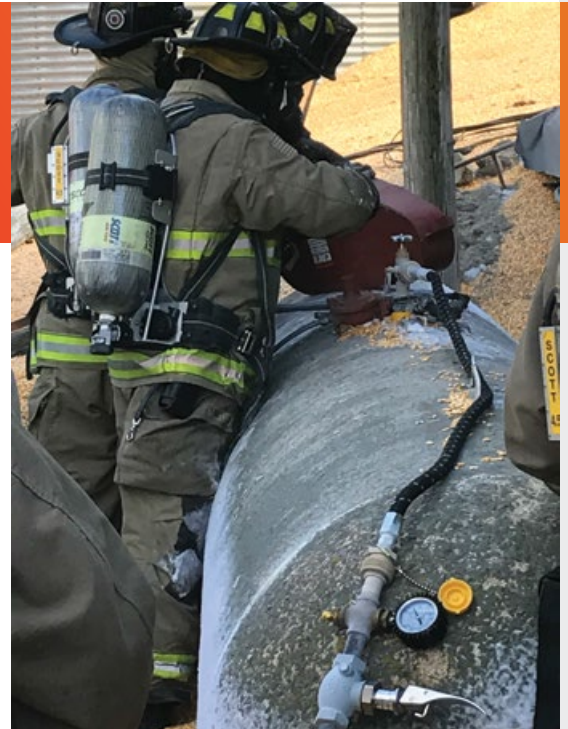
The kit, including hardware and hoses used to find leaks in propane tanks and control them, has been used for both incidents and training.

At the time of the donation, Ubben said Region V Hazmat, which covers nine counties in Iowa served by that region's Local Emergency Planning Committee, was the only team in the state to acquire the kit, valued at close to \$4,000.

**"For Valero, safety is a top priority for both our employees and the community around us."**

"We have a very rural area with a lot of farming communities that use a lot of propane," he said. "We provide that (response) capability to the whole nine counties that we cover. It helped our region out tremendously," Ubben said.

Corey Collet, Manager of Health, Safety and



Firefighters use a propane response kit donated by the Valero Fort Dodge ethanol plant to relieve pressure on a damaged gas line at an area grain bin.

Photo courtesy of Fort Dodge Fire Department

Environmental for the Valero plant, said the kit donation was one more example of a long-standing collaboration with the department. He said Valero also invited firefighters to meet at and tour the plant in 2017.

"We thought it was important since there were a number of new firefighters in the department," he said. "We wanted to make it an open door kind of thing – not only are they wanted and needed, they're welcomed here."

## emergency preparedness

Valero has implemented an emergency preparedness program to ensure its response readiness. We train and prepare to make sure that in the event of an emergency, we do the best job possible to protect personnel, the community and our environment.

Our program starts with a consistent emergency management process and organization that has the ability to provide immediate and comprehensive support and response.

The effort provides for qualified emergency response teams, training for responders and managers, relationships with outside emergency response personnel, regular drills and assessments, critical capital resources and quality software, web-based tools and other necessary resources.

Valero's corporate Emergency Operations Center (EOC) is a state-of-the-art facility that coordinates support of our local response organizations. The EOC optimizes communication and coordination through information management, sharing and presentation. It allows support to be provided by subject-matter experts throughout the company.

## Pipeline Public Awareness Program

The Valero Energy Pipeline Public Awareness Program actively works to enhance safety and environmental protection by raising public awareness and knowledge of the company's operations. In particular, the program reaches out to public officials and key stakeholder audiences to share information not only about the presence of pipelines in their areas but their role in transporting energy.

Valero is committed to operating safely and protecting the environment. And raising awareness in the communities along Valero's pipelines reduces the likelihood and potential impact of emergencies, through education and programs like Call Before You Dig.

Valero operates its Pipeline Control Center in San Antonio for all of its pipeline and terminal locations, with emergency contact numbers posted on its website, where informational brochures also are available.

While emergencies are rare, Valero conducts annual exercises for its pipeline operating systems throughout the company.



Valero completes construction of the Diamond Pipeline, in partnership with Plains All-American. U.S. Department of Transportation statistics show that underground pipelines are one of the safest modes of transporting crude oil.

## Calm Before the Storm is Critical in Hurricane Preparation



The Port Arthur refinery sits in flood waters in the aftermath of Hurricane Harvey. Preparations ahead of the storm, and quick action during, allowed the refinery to begin restart within two weeks.

Valero coordinates a comprehensive hurricane preparedness program across its Gulf Coast refining and distribution systems. We combine site- and corporate-level resources to deliver a focused response.

Never was this more evident than with Valero's response to Hurricane Harvey in 2017.

Preparation begins well before a storm, with completion of site readiness checklists for facilities, equipment, personnel and contractors.

Seasonal contracts with equipment and service providers ensure resources are immediately available for a range of operational contingencies. Importantly, Valero uses what it learns from past storms to drive prompt decision-making in support of its employees and facilities.

Hurricane Harvey was a catastrophic storm that would affect operations at six of our Gulf Coast refineries and challenge supply distribution.

Initially, Valero was forced to shut operations at its two Corpus Christi refineries and at Three Rivers, followed by Port Arthur amid heavy flooding there. Refineries at Houston and Texas City ran at reduced rates throughout the hurricane, due to surrounding infrastructure affected by the storm.

**Valero recognizes that its people are its greatest asset, and that also plays a key role in a prompt and successful response.**

Remarkably, within two weeks of first landfall, both Corpus Christi refineries were back to full operation, Three Rivers and Port Arthur were restarting, and supply was back on the market, despite some initial shortages as demand spiked.

Underscoring supply-chain efficiency, Valero worked closely with industry partners and government agencies to speed delivery of fuel as refineries restarted.

Clearly also, Valero's efforts to shore up its refineries following Katrina and other hurricanes a decade earlier – such as bolstering infrastructure and raising electrical stations to protect from flooding – made its facilities more prepared.

Valero recognizes that its people are its greatest asset, and that also plays a key role in a prompt and successful response. We first encourage employees to make pre-season home preparations with their families, maintain awareness and develop evacuation plans.

But in addition, we set up a Corporate Crisis Response Center to support locations in the path of a storm. Once the threat from Hurricane Harvey was identified, we notified all employees and contractors in the path, released ride-out crews to prepare homes and ensure families were able to evacuate as needed, and placed service providers on standby.

Taking care of people first in their hour of need results in quicker recovery for everyone, and allows employees to return to work quickly and stay focused on safety.



Chad Rollans, Operator 2 at the Benicia refinery, appears in front of a flue-gas scrubber that has dramatically reduced emissions.

**We produce environmentally clean products and are committed stewards of the environment.**





In 2017, Valero achieved its best-ever environmental performance for a second consecutive year, reducing its number of incidents by 5 percent from the previous year, on top of a 32 percent reduction from 2015. And over the past decade, performance has improved by 71 percent.

**71%** ↓  
reduction in incidents

We accomplished this by strengthening incident investigations and taking corrective actions to prevent recurrence of environmental events.

We additionally have spent billions of dollars on environmental upgrades at our refineries that have reduced emissions and improved the environment. These include flue-gas scrubbers that dramatically slash emissions of sulfur dioxide, nitrogen oxide and particulate matter, and flare-gas recovery systems that capture and recycle gases that otherwise would be flared.

By maintaining our emphasis on reliability, operational excellence and enhanced incident investigations, we will continue to target best-in-class environmental performance.

As it is, Valero finished highest among independent refiners in Newsweek magazine's 2017 Green Rankings of the 500 largest U.S. publicly traded companies assessed on a variety of environmental metrics.

Valero jumped 256 spots on the list from the previous year, on the strength of the company's productivity in relation to energy and water usage compared with the industry.

## flaring, criteria emissions

Since 2007, reportable refinery flaring events have been reduced by more than 73 percent, as a result of Valero's companywide flaring reduction initiative and improvements in reliability.

**73%** ↓ flaring reduction

Valero also has reduced emissions from routine flaring events by more than 75 percent from 2012 levels.

We additionally have focused on reducing total "criteria" emissions of other gases and compounds. Since 2007, the total criteria-emission rate dropped 54 percent through 2016, the most-recent year reported.

## environment quick stats



Gallons of usable oil from waste materials recovered and reprocessed through coker injection



Dry tons of material recycled through coker injection process, a 16 percent increase from 2016



Ethanol plants in the Midwest



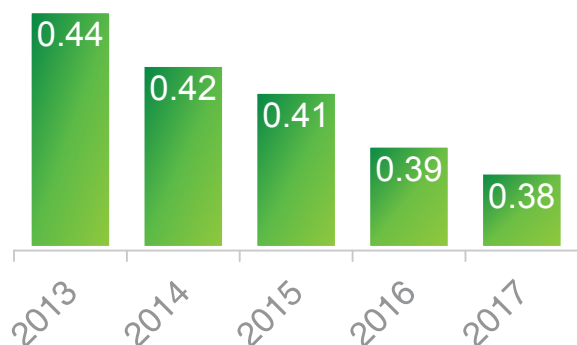
Megawatt wind farm that partly powers the McKee refinery, at Sunray, Texas

## energy conservation

Valero has continually improved energy conservation at its refineries, as a number of sites now consistently rank among the top facilities in energy efficiency in industrywide surveys.

Since 2013, the first full year with Valero's current refinery fleet, total energy use, as measured in British thermal units (Btu) per barrel of throughput, has declined 14 percent, due to continuing conservation and efficiency efforts.

**Refining Total Energy Use**  
(Million Btu per barrel of throughput)



## greenhouse-gas emissions

Valero closely follows regulatory developments and participates in professional and public-policy forums that address greenhouse gases.

Valero intends to continue to reduce its greenhouse-gas and other air emissions through adoption of new technologies, and improved and more efficient operations. The average per-barrel greenhouse-gas emissions for 2012-2016 decreased by 14 percent from the previous five-year average, according to most-recent available data.

Through initiatives such as flare-gas recovery, on-site power and steam cogeneration and alternative energy, Valero continues to produce clean and renewable fuels for the world's energy needs.

**14%** ↓ **reduction in greenhouse-gas emissions**

## wastewater management

Our manufacturing operations generate process water along with stormwater that must be treated before discharge or reuse. In fact, each of our refineries has a wastewater treatment plant that is comparable to ones operated by most cities.

These plants are operated by personnel trained and skilled in wastewater management and treatment. A corporate wastewater technology adviser works with each plant to ensure our systems are designed and operated to the highest standards.



## recycling processes

In 2017, Valero recovered 2.2 million gallons of usable oil from waste materials and reprocessed the remaining oil solids into high-value fuel through "coker injection."

Through this process, we recycled 10,806 dry tons of material in 2017, a 16 percent increase from 2016. Six Valero refineries currently employ coker recycling processes.

Also, we recycled material recovered from tank cleaning for use by cement kilns in their processes. The material otherwise would be incinerated, avoiding 5,085 tons of ash being sent to landfills — bringing the total to 26,234 tons since 2013.

## ethanol

Valero was the first traditional petroleum refiner to enter large-scale ethanol production, and now with 11 plants is one of America's largest ethanol producers, with production capacity of 1.45 billion gallons per year in the Midwest.

The plants are located in Albert City, Charles City, Fort Dodge and Hartley, Iowa; Albion, Nebraska; Aurora, South Dakota; Bloomingsburg, Ohio; Jefferson, Wisconsin; Linden and Mount Vernon, Indiana; and Welcome, Minnesota.

Ethanol is a clean-burning, high-octane renewable fuel produced by fermenting processed corn starch with yeast, and is blended with gasoline. A Valero plant can process up to 49 million bushels of corn into as much as 140 million gallons of ethanol annually.

The product left after ethanol is removed from fermented corn mash becomes a valuable livestock feed called distillers grains. Distillers grains make an excellent feed supplement for beef and dairy cattle, swine and poultry, and a plant can produce up to 368,000 tons annually.

Little liquid or solid waste is generated from the production process. The water treatment system at Valero's ethanol plant in Welcome, for example, generates no wastewater discharge, as one of the industry's first "zero liquid discharge" facilities.

It is designed to supply the plant's cooling tower, process make-up, boiler feed and fire-water needs by treating incoming well water, and recovers all plant utility water and nearly all stormwater back into the water treatment system to supplement the well-water feed into the front end of the treatment plant.



**2.8** gallons of ethanol

AND

**17** pounds of distiller grains



**1** bushel of corn

YIELDS

## environmental justice

Valero takes pride in being a good neighbor and the first energy company to adopt a formal Environmental Justice Policy, initiating a real outreach to fence-line communities.

The company diligently looks for ways to build relationships with its neighbors, such as in regular meetings with local community advisory panels (CAP), and expand upon its outreach in an effort to continue improving the quality of life of its communities.

For example, with Community In-power and Development Association Inc. (CIDA), a community environmental justice advocacy organization in Port Arthur, Texas, Valero has helped facilitate medical clinics, sponsored numerous minority youth development projects and supported area renewal projects.

Valero also takes an active role in fence-line air monitoring initiatives, such as in the Manchester community in Houston, and at the St. Charles and Corpus Christi refineries.

In Corpus Christi, Valero is a principal sponsor of the Long Term Health Workgroup, which reviews air-monitoring data on a monthly basis. Over the past decade, according to workgroup reports, the industry has reduced air emissions by 60 percent because of its collective work at investing in better technology and continuous work with fence-line residents.

### Valero's Environmental Justice Policy

Valero strives to operate as a good neighbor and to look for opportunities to work with local officials and directly with fence-line neighbors to improve quality of life for its neighbors and communities.

Valero aims to treat its fence-line neighbors fairly, regardless of race, color, national origin, culture or income. We work to ensure that our neighbors have an opportunity to understand our proposed activities, and to provide them with a meaningful opportunity to have their concerns heard, with the goal of providing them with greater comfort in our operations.



Doctors, nurses and staff stand outside the Gulf Coast Health Center-Westside Clinic, which was built with funding from the Valero Port Arthur Refinery as part of a Supplemental Environmental Project with EPA.



Port Arthur employees host a high school student at a Youth Fair, to promote careers in refining.

## No Kidding: Goats Mark Decade of Controlling Wildfire Risks at Benicia



David Frank, Safety Supervisor, watches as goats are herded across grassland at the Benicia refinery.

To employees, the Valero Benicia Refinery is a complex machine. To goats, it's a buffet. Employees have shared their workspace with these furry friends for nearly 11 years, with the refinery contracting with a local company to manage grass and weeds around the refinery. A shepherd and a few herding dogs supervise the goats while on the refinery property. The number of goats used varies from 350 to 900.

Some find them cute, but the goats serve an important safety purpose, according to Ray Castro Jr., Manager of Refinery Safety.

"We have a really bad wildfire risk around here, and we have low humidity," he said. "We can have the goats in spring and they're probably out here for a month or two and they're out of there by the time burn season starts."

Margie Mentch, now Manager of Supply Chain Execution, proposed the idea of getting the goats, after seeing goats used around town.

**"Instead of having people come out with weed whackers, I hired the goats. It's less expensive and a little bit greener."**

"When I approached the contract manager at the time, they started laughing," she said.

But Mentch wasn't kidding around – she said the goats have been ideal workers over the past decade.

"Instead of having people come out with weed whackers, I hired the goats," she said. "It's less expensive and a little bit greener."

Mentch said that while humans are still required to clear the areas closest to the refinery with tractors, the goats cover most of the firebreak area surrounding the refinery.

David Frank, Supervisor of Safety, added that others, including the City of Benicia, have switched to goats after observing the refinery.

"You don't think about using a goat for mitigation of fire potential in your area, but they do a really good job of cutting down on grass and weeds," he said. "The goats do a really good service for us."




Cletea Scott-Woodfork, Senior Environmental Engineer, and David Wagner, Superintendent-Cost Control, support Memphis nonprofit Feed the Needy at Thanksgiving.

We share our success with the communities where we live and work through volunteerism, charitable giving and the economic support of being a good employer.



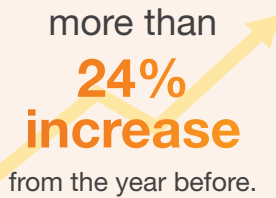
Overall in 2017, Valero, its employees and charitable organizations generated

more than  
**\$54 million**



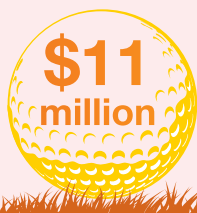
for worthy charities or causes, through direct donations or fundraising, a

more than  
**24% increase**  
from the year before.



In 2017, with the overwhelming support of its sponsors, the **Valero Texas Open and Benefit for Children** raised a record

**\$11 million** for charities across the U.S.



– fourth among PGA Tour events – distributed everywhere Valero has major operations in the U.S. Employees select the charities to receive funding.

In the U.S., the **Valero Energy Foundation** – Valero’s philanthropic arm – contributed approximately

**\$14.9 million**

plus in-kind donations to improve the lives of those who live in or near the communities where Valero has major operations.



Adding Valero corporate contributions, **\$24.7 million** in 2017.

**United Way**




Valero continues to be a national pacesetter for **United Way** funding in the U.S. We set a new record in 2017 with

**\$13.4 million**

pledged for contributions in 2018.

The total represents an **8% increase** and a per capita giving average of \$1,016.



In Canada, company and employee gifts to **Centraide/United Way** were approximately **\$650,000.**

**Valero Texas Open** is one of only four PGA Tour events to raise more than **\$100 million**, totaling more than **\$126 million** through 2017.

Valero in **Canada**, through its Benefit for Children golf tournament, has raised

**\$5 million** for children’s charities

throughout Québec, Ontario and the Atlantic provinces over the past **13 years.**

The event in 2017 raised

**\$400,000.**

The Valero Benefit for Children Golf Classic in the **United Kingdom** raised

**£156,000** (nearly \$211,660)

in just its fourth year.

## volunteerism

Valero established the Valero Volunteer Council in 1983. Today, volunteering continues to thrive and remains a vital aspect of Valero's company culture. Each location has a council serving its local community. Through the years, the councils have built a strong bond with many local charities, organizations and agencies where Valero has a presence.

- Valero employees companywide logged more than 153,000 volunteer hours in 2017 for hundreds of community projects, including mentorships, shelter support, holiday events and a host of other activities, translating to \$3.7 million in saved out-of-pocket labor costs.
- Employees serve on boards of nonprofit organizations wherever Valero has major operations. In San Antonio, 151 company leaders serve on 188 boards.
- Valero is a strong supporter of food banks wherever it operates, sponsoring several food drives each year. Since 2008, volunteers have donated more than 2 million pounds of food or monetary food equivalents in San Antonio alone.
- Valero Volunteers additionally have built numerous Habitat for Humanity homes throughout Valero's communities. Valero has contributed about \$1.5 million and thousands of volunteer hours helping to sponsor or build Habitat homes in virtually every region since 2008.



**more than 153,000**

2017 volunteer hours,  
valued at \$3.7 million



**2 million pounds**

of food or monetary food  
equivalents



**\$1.5 million**

for Habitat for Humanity  
since 2008



Valero Volunteers in San Antonio perform landscaping at Seton Home and St. Peter-St. Joseph's Children's Home, as part of their United Way Day of Caring activity.

## supporting our economy

Another way we share our success with the communities where we live and work is through the economic support of being a good employer. As the world's largest independent petroleum refiner, and one of the largest fuel-brand marketers and ethanol producers, Valero has a significant economic impact on the communities where it operates. For example:

- In 2017, we directly supported about 10,000 jobs with payroll bolstering local economies.
- We spend more than \$2 billion annually on maintenance and growth projects that boost construction jobs.
- Annually, we spend tens of billions of dollars procuring refinery feedstocks, refined products, supplies and services.
- Valero annually pays an average of more than \$1 billion in total taxes.
- We continue to buy domestic oil from areas such as the Permian Basin and Eagle Ford Shale formation.

All told, our expenditures multiply many times in support of local and national economies, and governments that provide vital services.



## Valero Energy Foundation Four Pillars of Support (U.S. charitable support)

### basic needs

The Valero Energy Foundation provided approximately **\$3.2 million** in assistance to agencies that provide basic needs of life to disadvantaged children and families, including shelter, food and clothing necessary for the development of a strong community and for individual self-sufficiency.

Support for emergency services, children's homes and area food banks are just a few examples of this support.

### education

The foundation is a strong advocate of education and contributes to programs, agencies or organizations that share the same focus. In 2017, it provided **\$5.8 million** in support to education-related programs throughout the U.S.

hospitals/  
health care  
**35%**

basic needs **21%**

education  
**39%**

civic **5%**

### health care

Overall in 2017, the foundation provided about **\$5.3 million** in support to various health care providers and health-related programs and services.

Major gifts include support of various children's hospitals as well as university medical centers for research to discover cures for Alzheimer's, Multiple Sclerosis and cancer.

### civic

The foundation believes in improving the quality of life for all in the communities where the company has major operations.

Through its support of civic programs and the arts, the foundation provided approximately **\$741,000** to quality arts programs, including partnerships with art, history and children's museums, as well as digital media in schools.



Edith Hart is an Operations Trainee at the Port Arthur refinery.

We consider our employees a competitive advantage and our greatest asset. As such, we provide them with a safe and rewarding work environment with opportunities for growth and personal development.



Being a member of the Valero team means sharing the drive to be “premier” in every way. We are anchored by our individual and collective commitments to guiding principles and our strong culture of excellence, teamwork and accountability. But our success is derived from the diverse ideas, backgrounds, opinions, experiences, perspectives and cultures of each of our employees.



Brie Williams and Sean Word (center) are Operator Trainees at the Benicia refinery, and Jacques Beugre is a Control Board Operator.

## diversity and inclusion

Valero is committed to diversity and inclusion to create, promote and support a winning workforce that works together to create its success, with respect for the value each employee contributes.

We embrace the idea of diversity and inclusion not simply as a program, but as a driver that enables the development of the best teams in the industry whose diverse talents, thoughts and experiences, combined with Valero’s continuous drive toward excellence, inspire innovation, the creation of value and the delivery of industry-leading performance.

Because of this, our commitment to diversity and inclusion is woven into all aspects of employment at Valero, including recruitment, hiring, development, compensation and advancement.

## training and development

Developing our people is a core competitive advantage. We strive to attract, develop and retain the most talented individuals to drive key organizational results.

Our training and development strategy begins with a strong commitment to providing employees with the tools and resources that support our established safe work environment. Safety is our highest priority, and safety principles are incorporated into all of our training and development programs.



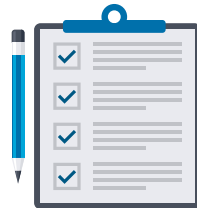
Leslie Solis, a Senior Refinery Chemist at the Port Arthur refinery, examines a sample in the facility’s lab.

Additionally, an exceptional employee integration program helps each new team member understand our industry, culture and how their individual role fits into the overall organizational strategy.



### employee integration program

### technical training



### tuition reimbursement

Our programs are customized for all levels of the organization, empowering each individual with the skills and competencies to help them perform to their potential. We continuously improve these programs and adapt to industry standards, providing learning flexibility and most up-to-date content.

Technical training, including Basic Operator Training, Operational Training and Qualification, Refinery Supervisor Development, Console Training and Qualification, and Engineering Technical Excellence programs are aligned with and provide a foundation for achieving Valero's high standards for operational excellence.

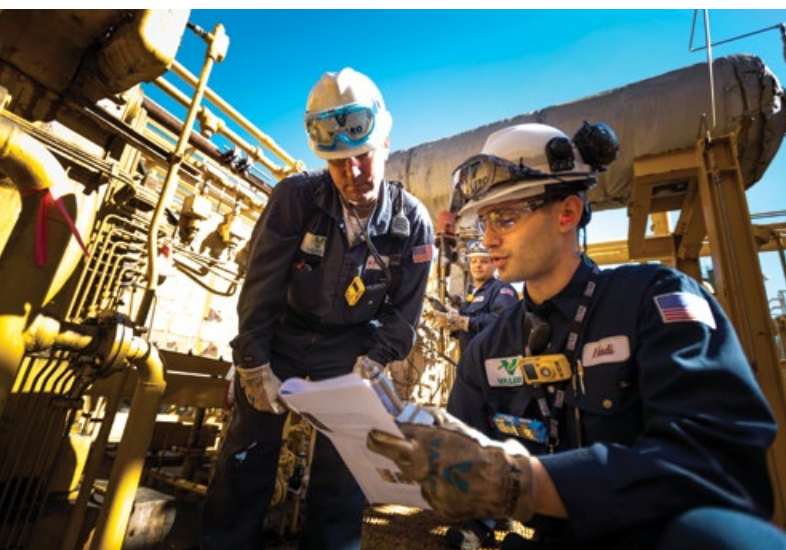
Our strong culture of teamwork also motivates team members to teach and develop each other, to ensure the success of the organization.

Employees are encouraged to use numerous company resources, industry organizations and tuition reimbursement to advance their careers, realize personal enrichment and achieve success.

## distinctive rewards and benefits

At Valero, we invest in our employees through competitive pay and rewards programs that provide each employee the opportunity to share in the company's successes and build long-term financial stability. Employees also are provided with high-quality, comprehensive and customizable benefits programs at minimal cost, with a focus on flexibility and convenience.

Valero's compensation and rewards programs are designed to ensure all employees are provided market-competitive pay and long-term financial benefits that also drive individual, team and companywide performance. Our pension and retirement savings plans, which receive significant company funding and contributions, allow each employee to achieve savings goals for retirement. Valero also significantly subsidizes medical, dental, vision and other wellness-related programs, and provides a variety of optional benefits to ensure that all of its employees and their family members have access to quality and affordable health care that can be customized to their needs.



Lead Maintenance Specialist Joe Brown (left) and Senior Mechanical Engineer Hadi Jammal perform maintenance at the Benicia refinery.



Valero Chairman, President and CEO Joe Gorder greets Health by Design doctors of the new Valero Family Wellness Center (left to right) Dr. Cecilia Van Bibber, Dr. Elizabeth Shivone and Dr. Julie Pursch.

## total wellness

Valero's Total Wellness Program is one of the ways we show our employees they are our greatest asset. The program offers many valuable and innovative benefits promoting and encouraging health and financial wellness.

Valero is committed to improving lives by offering tools and resources that take a preventive approach to health and a proactive approach to wealth. The program was designed recognizing that employees with higher levels of health and financial wellness are more engaged and able to contribute to their own success, the overall success of the company and to the communities where they work and live.

Valero offers a variety of health and wellness resources for its employees, including comprehensive health and welfare benefits for employees and their families; a free comprehensive annual wellness assessment to help identify health issues before they become serious; on-site fitness centers at many of our facilities and a fitness subsidy for those sites without an on-site facility; and employee wellness centers that provide a wide variety of comprehensive and preventive services at little or no cost.

In late 2017, we opened a Family Wellness Center at our San Antonio headquarters to provide the same high level of care to our employees' families that is received at our employee wellness centers.

Given the diverse landscape of Valero's employees with regard to age, career level and financial knowledge, different priorities exist as they relate to financial wellness. With this in mind, Valero offers robust 401(k) and pension plans, as well as financial wellness workshops that help educate our employees at any stage of their careers.

As part of this effort, we have introduced a total wellness session into our Basic Operator Training program to teach our new employees the importance of health and financial wellness as they begin their careers at Valero.

Through Valero's commitment to offer these programs, our employees can engage in healthy and fulfilling lifestyles and make sound financial choices to promote their total wellness and that of the community.



Parents and children participate in the Valero Family Wellness Center grand opening festivities.



The Corpus Christi West refinery has undergone several strategic additions in recent years, including a new crude unit.

Our stakeholders are our partners to whom we pledge to deliver operational excellence, disciplined management of capital and long-term value.



Valero's vision is to be the premier manufacturer, distributor and marketer of quality transportation fuels and petrochemical feedstocks, while serving the needs of our employees, communities and stakeholders.

This vision is fueled by integrity, adhering to the highest standards of ethical conduct and corporate responsibility.

Our strong corporate governance principles, implemented under the guidance of the board of directors, are a major driving force of our Guiding Principles. Our governance affairs are directed by our Corporate Governance Guidelines, Code of Business Conduct and Ethics and the charters of the board's committees.

## board of directors

At the close of 2017, the board included one member from our management (our Chairman, President and Chief Executive Officer) and 10 non-management directors. Each of the non-management directors meets the independence requirements of the New York Stock Exchange listing standards.

The board has the following committees: the Audit Committee, Compensation Committee, and Nominating/Governance and Public Policy Committee. The committees are composed entirely of independent directors under the NYSE listing standards. Each member of the Audit Committee also meets the additional independence standards for audit committees required by Securities and Exchange Commission regulations.

Health, safety and environmental audits of Valero facilities are reported annually to the Nominating/Governance and Public Policy Committee. Each Valero facility is audited by a team of trained environmental or health and safety auditors, including "peer auditors" from other Valero facilities.

For more information on the board committees and their responsibilities, stakeholder engagement, business compliance and other governance matters not included in this report, please consult the Investor Relations page of our website, [www.valero.com](http://www.valero.com).

Valero directors join management for annual site visits.



## code of business conduct and ethics

The Code of Business Conduct and Ethics guides the employees and directors of Valero and its subsidiaries to fair, ethical, honest and lawful conduct.

- Through our Code, we exhibit our strong and clear commitment to ethics as part of our core values. From safety to confidentiality to proper use of company assets and accurate reporting of financial information, the Code strives to ensure that our company and our employees maintain the highest standards of ethical behavior at all times. We treat it as a critical document for all Valero employees to read, understand and put into practice every day.
- Valero is committed to training its employees about ethical business practices, and we have several mechanisms in place to instill the importance of our Code of Business Conduct and Ethics.
- The company nurtures an open and trusting environment in which employees are encouraged to look for opportunities to strengthen ethical behavior. Valero has established a confidential, toll-free hotline for employees to call with questions or reports of improper ethical behavior.

# valero highlights

## safety

- Posted company's lowest-ever refinery employee incident rate of 0.28 recordable incidents per 200,000 working hours, compared with an industry average of about 0.6
- Posted its lowest-ever process safety event rate, a three-year rolling average of 0.066 Tier 1 API events per 200,000 working hours – a 71 percent reduction since 2010
- Recorded its highest-ever refinery mechanical availability, at 97.3 percent

## environment

- Recorded its lowest-ever number of environmental incidents, a one-third reduction from two years ago and a 71 percent improvement the past decade
- Reduced total criteria emissions more than 54 percent since 2007
- Reduced reportable refinery flaring events more than 73 percent since 2007
- Reduced emissions from routine flaring more than 75 percent since 2012
- Reduced average greenhouse-gas emissions 14 percent over latest five years available, compared with previous five-year average
- Reduced refining total energy use more than 14 percent since 2013

## community

- Generated more than \$54 million for worthy charities or causes through direct donations or fundraising by the company, its employees and its charitable foundation
- Pledged \$13.4 million to United Way for 2018, from employee pledges and company matches
- Raised a record \$11 million for children's charities from the Valero Texas Open and Benefit for Children, among the largest charity events on the PGA Tour
- Logged more than 153,000 volunteer hours for hundreds of community projects



Benicia refinery volunteers participate in construction of a Solano-Napa Habitat for Humanity project.



## awards

- Ranked highest of any U.S. refiner (No. 8) in the Platt's Top 250 Global Energy Company Rankings 2017 for outstanding global financial and industry performance
- Named fourth consecutive time to list of America's 50 most community-minded major companies – The Civic 50, an initiative of Points of Light – and the leading company in the energy sector on the list
- Ranked highest among independent refiners in Newsweek magazine's 2017 Green Rankings of the 500 largest U.S. publicly traded companies assessed on a variety of environmental metrics
- Received Institutional Investor magazine's 2018 All-America Executive Team awards in the integrated oil sector, including Best CEO overall to Joe Gorder; Best CFO (third, sell side) to Mike Ciskowski; Best IR Professional (third, overall; and second, sell side) to John Locke; and Best Investor Relations Program (third, overall; second, sell side)
- Most refineries (10) approved as Voluntary Protection Program Star Sites, OSHA's highest plant safety designation, after voluntarily submitting to and passing rigorous safety audits
- Three asphalt terminals and aviation department approved for VPP Stars
- Received five safety awards from American Fuel & Petrochemical Manufacturers (AFPM), including an Elite Silver Safety award to the Wilmington refinery
- Community Partner of the Year for Solano County, California, to the Benicia refinery from United Cerebral Palsy of the North Bay
- Best All-Employee Share Plan award from the World Employee Share Ownership Centre, and ProShare Award (best overall performance), both to Valero's U.K. operations for its employee share incentive plan
- Best Application of Engineering and Technology award at the Engineering Education Scheme Wales event to first-year Pembroke refinery apprentices attending Pembrokeshire College
- Outstanding Regional Corporate Award from Diabetes Canada in Newfoundland, for Valero's support of the summer camp program for children with Type 1 diabetes
- First place Corporate Cup from nonprofit San Antonio Sports to Valero headquarters, in large company category, for a series of athletic and charitable events



First-year Pembroke refinery apprentices receive a Best Application of Engineering and Technology award at the Engineering Education Scheme Wales event.



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