



ESG Company Overview – Benicia Community Advisory Panel

September 2020

Environmental, Social and Governance



- Renewable fuels
- Greenhouse gas (GHG) emissions
- Energy efficiency
- Climate risk
- Water management
- Recycling processes
- Emergency preparedness




- Health and safety
- Working conditions
- Employee benefits
- Diversity and inclusion
- Human rights
- Impact on local communities



- Ethical standards
- Board diversity and governance
- Stakeholder engagement
- Shareholder rights
- Pay for performance

For more information, please see our Stewardship and Responsibility Report in the ESG section at investorvalero.com

Largest Global Independent Refiner and North America's Largest Renewable Fuels Producer



Refining

Largest global independent refiner

15 petroleum refineries


3.2 million barrels per day throughput capacity*

Environmentally responsible operations

Safety is our foundation for success

Lowest-cost operator in the industry

Manufacturer and marketer of **transportation fuels**, petrochemical feedstocks and other specialty products



Renewable Diesel

World's 2nd largest renewable diesel producer**


275 million gallons per year

Produces low-carbon intensity renewable diesel from recycled animal fats, used cooking oil, and inedible corn oil

100% compatible with existing engines and infrastructure

Planned expansion to **675 million gallons per year** by 2021

Low-carbon fuel sold in California, Canada, and Europe



Ethanol

World's 2nd largest corn ethanol producer

14 ethanol plants in the U.S. with a combined production capacity of **1.7 billion gallons per year**

Clean-burning high-octane renewable fuel with **lower emissions**

20% share of U.S. ethanol exports in 2019

Low-carbon fuel well-positioned for **export growth**

*Processing of crude oil and other feedstocks

**Joint venture with Darling Ingredients Inc.

Valero's Vision

Our products **fuel modern life** and make a **better future possible.**



**FORTUNE
500**

Fortune 32
company



~10,000
employees



NYSE:
VLO

Headquartered in
San Antonio, Texas

WHAT FUELS US

We relentlessly **pursue excellence**; hold ourselves to the **highest standards of safety, operations and integrity**; and **care** about the environment, our employees, and the communities where we work and live.

HOW WE FUEL THE WORLD

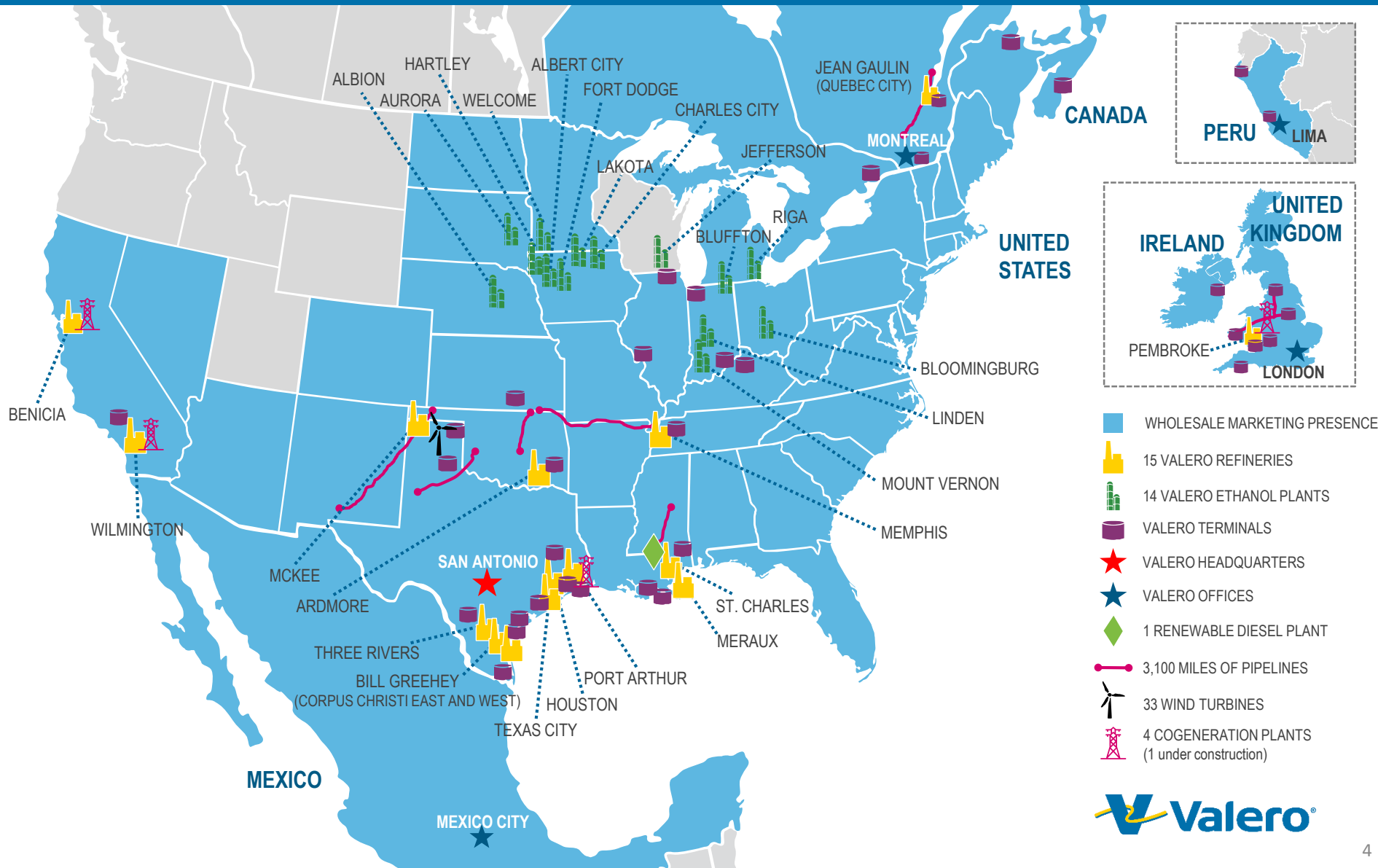
We are the **best-in-class producer** of essential fuels and products that are **foundational to modern life.**

OUR VISION

The world needs **reliable, affordable, and sustainable energy**. We are advancing the future of energy through **innovation, ingenuity, and unmatched execution.**



Global Operations



2019 ESG Summary

E

ENVIRONMENTAL



Renewable fuels displaced more than **6.1 million metric tons of GHG emissions**



Robust Environmental Management System

Operational excellence and **best year in employee safety**



- **Largest renewable fuels producer in North America** (more than **\$2.7 billion** invested)
- **Best year ever** for environmental incidents, flaring, energy consumption and GHG emissions intensity
- **Best year ever** for refinery employee safety

S

SOCIAL



Recognized as one of **World's Best Employers**, **America's Best Large Employers**, and **Best Employers for Women** by Forbes magazine

More than \$64 million in donations and fundraising



- Focus on **diversity, inclusion** and **professional development**
- High **employee volunteerism** (~150,000 hours)
- **2019 Economic support**: ~10,000 employees, ~\$2.5 billion spent on maintenance and growth projects; ~\$4 billion on refining materials and services; and ~\$700 million taxes paid

G

GOVERNANCE



5 directors represent **board diversity** in gender and race, **3 are women**

- Strong corporate **governance**
- **Board oversight of risks and compliance**, including climate-related risks
- Committed to **ESG engagement**
- All-employee **bonus program includes ESG initiatives**



Largest Global Independent Refiner

Refining

The Lowest Cost Operator in a Highly Competitive Industry



15 petroleum refineries



Fuels marketed
through bulk and
wholesale network



~6,000
employees in
refinery
operations



**3.2 million
barrels per
day** throughput
capacity

Manufacturing high
quality
**transportation
fuels,
petrochemical
feedstocks,**
and other specialty
products

Approximately
7,000
independently
owned outlets carry
our brand names

Valero's Refineries



3,100 miles
of active
pipelines



Over **130 million
barrels** of
storage

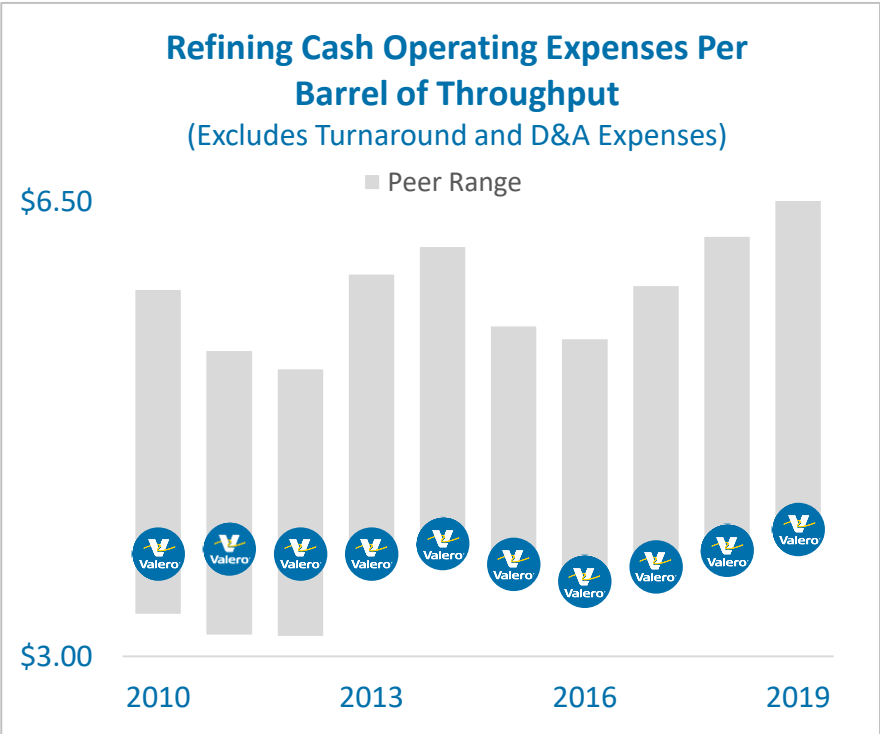


Over **50 docks**

Investing in our Assets and Reducing our Energy Consumption Lowers our Operating Costs



Lowest-cost producer while maintaining 1st quartile levels of mechanical availability



Peer group includes PSX, MPC, HFC, and PBF.

Investments in **technological advances** and **predictive maintenance**, and **prioritization** of **lower emissions** and **reduced energy use** deliver **operations excellence**

\$1.5 billion in 2019 in capital expenditures to sustain our operations

Safety is our foundation for success, with our best year ever in 2019 for employee safety

Beyond Compliance: Industry Leader in Voluntary Protection Program Star Sites, a voluntary program, regarded as OSHA’s highest plant-safety designation





North America's Largest Renewable Fuels Producer

Renewable Fuels: Renewable Diesel + Ethanol

Renewable Fuels Reduce Life-Cycle GHG Emissions

Combined, our renewable diesel
and ethanol fuels



reduced more than
6.1 MILLION
metric tons of GHG
emissions in 2019,

compared with standard gasoline or
ultra-low-sulfur diesel.

For context, that is more than
twice the amount of GHG
from all direct fuel use annually
in **Washington D.C.**



\$2.7 Billion Invested in Low-Carbon Fuels

**World's 2nd largest
renewable diesel producer**

\$1 billion invested and committed
in renewable diesel since 2013*



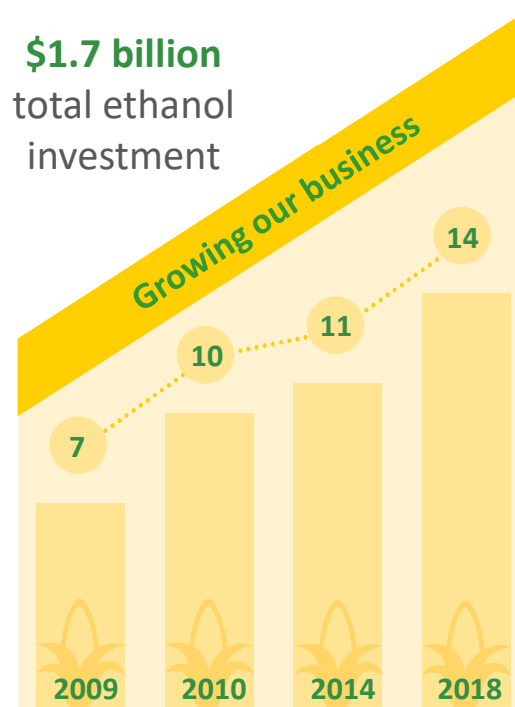
275 million gallons per year with
an **expansion to increase
production to 675 million
gallons per year** by 2021

**World's 2nd largest
corn ethanol producer**



\$1.7 billion
total ethanol
investment

**Ethanol plant
ownership has
doubled** since
the initial
7-plant
acquisition
in 2009



**In 2020, 30% of growth capex, or around \$250 million, will be dedicated to
renewable fuel projects**

Renewable Diesel Reduces Life Cycle GHG Emissions up to 80%

World's 2nd largest
renewable diesel
producer

Reduces life cycle
GHG emissions
up to 80%, compared
with traditional diesel



Renewable diesel
is **100% compatible**
with existing engines
and infrastructure

*Note: Joint venture with Darling Ingredients, investment represents Valero's 50% share

Uses **recycled or discarded animal fats, used cooking oils, inedible corn oil** and/or vegetable oils to produce low-carbon intensity renewable diesel fuel, sold in California, Canada and Europe

275 million gallons per year; adjacent to our St. Charles refinery **to capture synergies** and **gain access to export markets**

2021 expansion to **increase production to 675 million gallons per year**



A new plant adjacent to our Port Arthur refinery is in the review stage, if approved, production would **start in 2024**, resulting in more than **1.1 billion gallons per year**

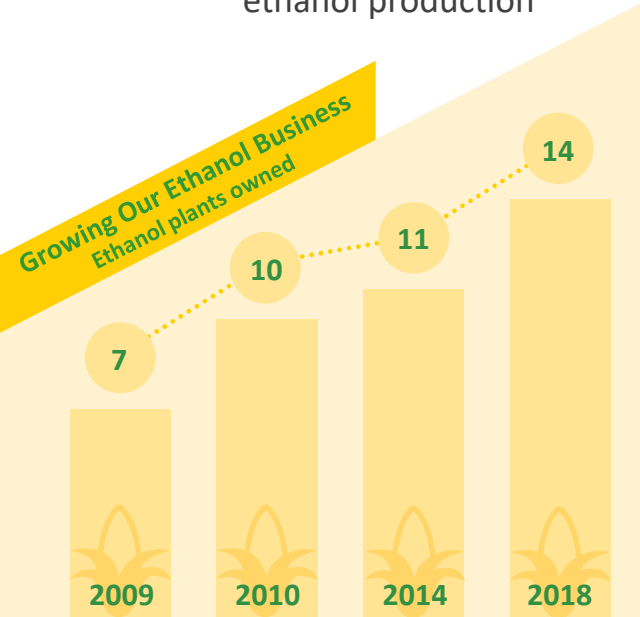
Ethanol Reduces Life Cycle GHG Emissions up to 28%



Ethanol plants convert corn into ethanol (transportation fuel) and distillers grains (a livestock feed)

1st

traditional refiner to enter large-scale ethanol production



14 ethanol plants with a combined production capacity of 1.7 billion gallons per year



Reduces life cycle GHG emissions

up to 28%, compared with non-blended gasoline

Valero's Ethanol Plants



World's 2nd largest corn ethanol producer

EPA Efficient Producer Program for superior process efficiency

20% share of U.S. ethanol exports in 2019 and growing

*Six sites recognized, three sites pending



~1,000 employees



Environmental Excellence and Risk Assessment



A component of our Environmental Management System, Valero's **Environmental Excellence and Risk Assessment (EERA)** defines expectations and involves a multi-faceted assessment program with ownership at the site level and responsibility across multiple disciplines.

Elements of the Environmental Excellence and Risk Assessment

1. Leadership, Accountability and Ownership
2. External Stakeholders
3. Recognition and Management of Significant Environmental Risks
4. Environmental Compliance Systems and Performance Assurance
5. Air Quality
6. Water Management
7. Waste Management and Spill Prevention

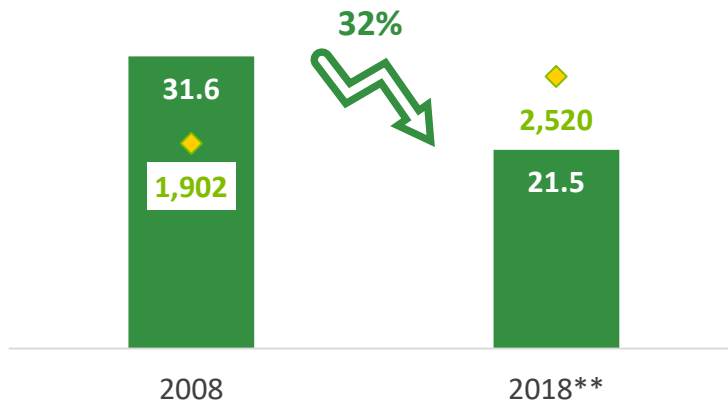


Continuous Reduction of Air Emissions and GHG Emissions Intensity



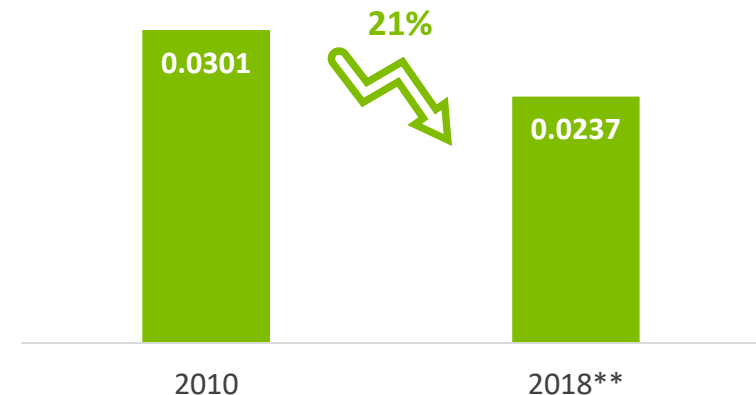
Air Emissions*

■ Thousand Tons ♦ Thousand barrels per day of throughput



- Since 2008, Valero U.S. refineries have **decreased criteria air emissions by 32%** while increasing throughput capacity by 32%

Refining Greenhouse Gas (GHG) Emissions (Tons of carbon dioxide equivalent per barrel of throughput)



- This reduction has been accomplished through **multi-million dollar investments**, the **use of new technologies**, and the **implementation of operational processes** that involve reusing or reducing combustion

*As defined by EPA, criteria emissions include carbon monoxide, nitrogen oxides, particulate matter, volatile organic compounds and sulfur dioxide

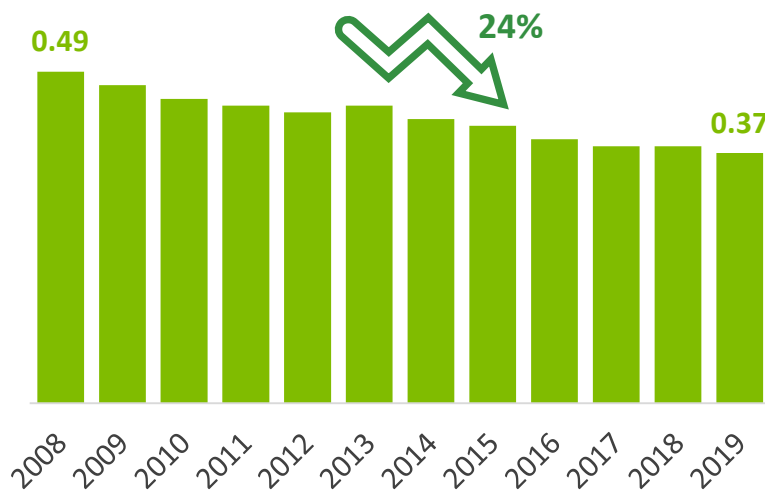
**Data is for U.S. refineries only; final data available through 2018

Steady Energy Conservation and Substantial Reduction of Flaring Events



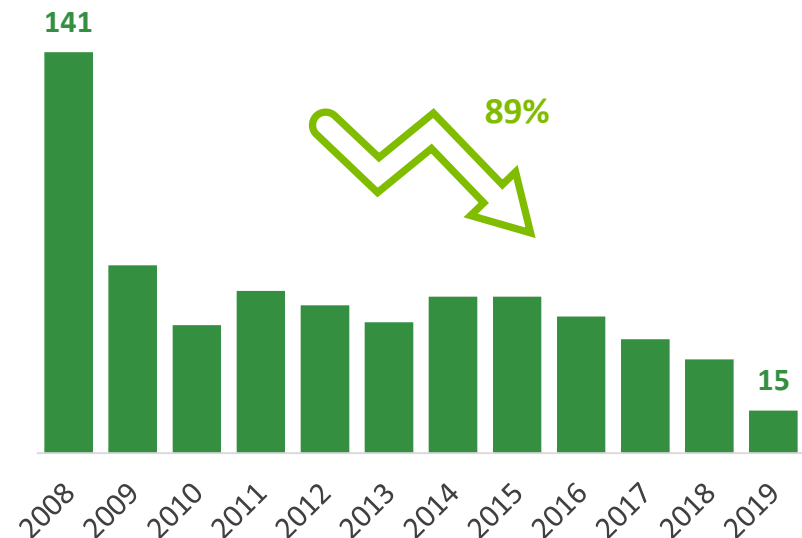
Refining Total Energy Use

(Million BTU per barrel of throughput)



- Continuous improvement in **energy conservation drives efficient performance and contributes to profitability**
- Our refineries have achieved a **24% reduction** in energy use per barrel of throughput since 2008, when we launched our **Commitment to Excellence Management System** (CTEMs)
- In 2019, Valero's refineries set a **new record low** for energy use per barrel of throughput

Annual Flaring Events



- **New record low** after **89% reduction in total flaring events** since 2008
- Aggressive steps to **eliminate the need for flaring**, by **avoiding outages** and **improving reliability**
- Valero has maintained **99% flaring-free** refinery operations

Wind Farm: Reducing Emissions and Energy Use



50

megawatts of power-generation, partly
powering the McKee Refinery

33

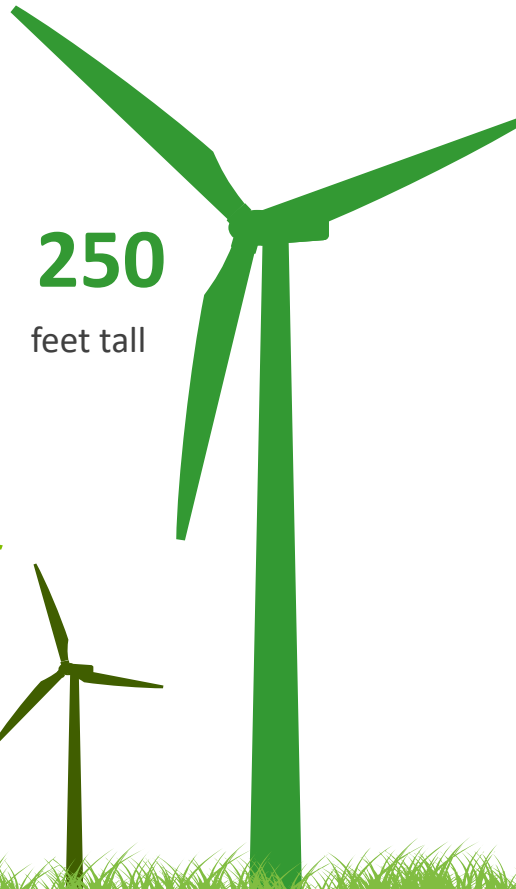
turbine wind farm in
the Texas Panhandle
at our McKee Refinery,
built in 2009

250

feet tall

\$80 million

capital
investment



Since 2009, the wind farm
has reduced or avoided



~830,000 tons
of carbon dioxide emissions



An amount equal to planting
~12.5 MILLION
urban trees*

*Estimated based on EPA's GHG Equivalencies calculator for urban tree seedlings grown for 10 years

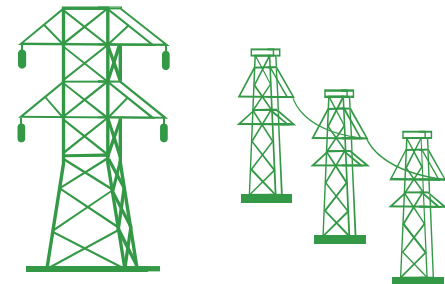
Cogeneration Plants and Expanders



Boosting power and environmental performance, and reducing operating expenses

- **Fueled by natural gas**, our cogeneration plants **reduce our reliance on local power grids**, which are often less environmentally friendly and more costly
- Cogeneration represents a **very efficient way of making power**, with the **steam recycled back** into the refining process for other uses
- **Four cogeneration systems**: 2 in California, 1 in Texas and 1 under construction in the U.K.
- **Expanders** are installed at 6 of our refineries **generating power from exhaust gases**
- **Expanders annually displace more than 600,000 tons of carbon dioxide** that otherwise would be generated by conventional power providers

Combined, our cogeneration systems and expanders offset **~330 megawatts** of electricity



Enough to power more than **~400,000 homes**



Carbon Capture: Innovation and New Technologies



Capturing Carbon Dioxide and Storing it Underground

National Petroleum Council (NPC) study on scaling carbon capture in the U.S.

- As a member of the NPC, Valero played an active role in the development of a 2019 study that sought to **determine the regulatory support and technology developments required to deploy carbon capture**, utilization, and storage (CCUS) at scale in the U.S.
- The study can be found at dualchallenge.npc.org

Assessing the feasibility of CCUS in all of our operations

- Ethanol plants have highly concentrated CO₂ streams** that may provide an economic path for carbon capture
- Other refining process streams with **high concentrations of CO₂** such as **hydrogen production** provide opportunities
- Our **Port Arthur refinery hosts the capture of 1-million-ton-per-year CCUS** project

Nature-based carbon storage

- Led by Rice University's Baker Institute for Public Policy, Valero is a corporate founder of the **nature-based carbon market framework**
- Enable a credit trading market for carbon** stored in soil
- Additional benefits include **enhanced drought resistance** and **minimization of flooding**
- Farmers and ranchers could see **economic benefits** through participation in this Ag-based carbon trading program

1 million tons of CO₂e
equal the amount sequestered by
~15 MILLION urban trees*



*Estimated based on EPA's GHG Equivalencies calculator for urban tree seedlings planted and grown over 10 years

Innovative Solutions by Recycling, Reusing, Reclaiming, and Reducing



Many of our refinery units exist for environmental purposes, such as **removal of sulfur**. Once extracted, the sulfur is utilized for a variety of beneficial uses such as **crop fertilizer** and for **purifying drinking water**.



Every drop counts, **recovered product from waste materials** is converted into high-quality fuels.

Our headquarters recycled **327 tons** of material in 2019, and regularly recycles **20,000 gallons of water per day** from its cooling system for irrigation.



Most of our refineries treat and **reuse their wastewater** using **advanced biological treatment systems** comparable to, or even more complex than those operated by most cities.

Wastewater from our Three Rivers refinery is treated and **sent to nearby hay fields for irrigation**.



Being the most efficient and reliable operator in a highly competitive industry means being the most environmentally responsible

- Producing renewable fuels
- Reducing GHG emissions*
- Reducing energy consumption*
- Reusing waste streams
- Recovering usable materials

*Per barrel of throughput

Reporting Frameworks: TCFD and SASB



“Our investments in flexible and efficient manufacturing, renewable fuels and the infrastructure critical to our operations help us meet today’s needs and prepare for future energy markets.”



Full report available on the
ESG section at
investorvalero.com

Prepared under oversight of our board of directors, this report follows the **TCFD*** recommendation to assess the resilience of our business strategies under a potential transition to a lower-carbon economy consistent with a 2-degree scenario.

We are in the process of assessing our operations against the **Sustainability Accounting Standards Board (SASB)** materiality criteria and plan to present a report later in 2020.



*Task Force on Climate-related Financial Disclosures of the Financial Stability Board

Contacts

For more information, please contact:

Giovanna Rueda

Director, Regulatory
Compliance and ESG

210.345.6474

giovanna.rueda@valero.com

Homer Bhullar

Vice President,
Investor Relations

210.345.1982

homer.bhullar@valero.com

Eric Herbort

Sr Manager,
Investor Relations

210.345.3331

eric.herbort@valero.com

Gautam Srivastava

Manager,
Investor Relations

210.345.3992

gautam.srivastava@valero.com