# Rodeo Renewable Energy Complex

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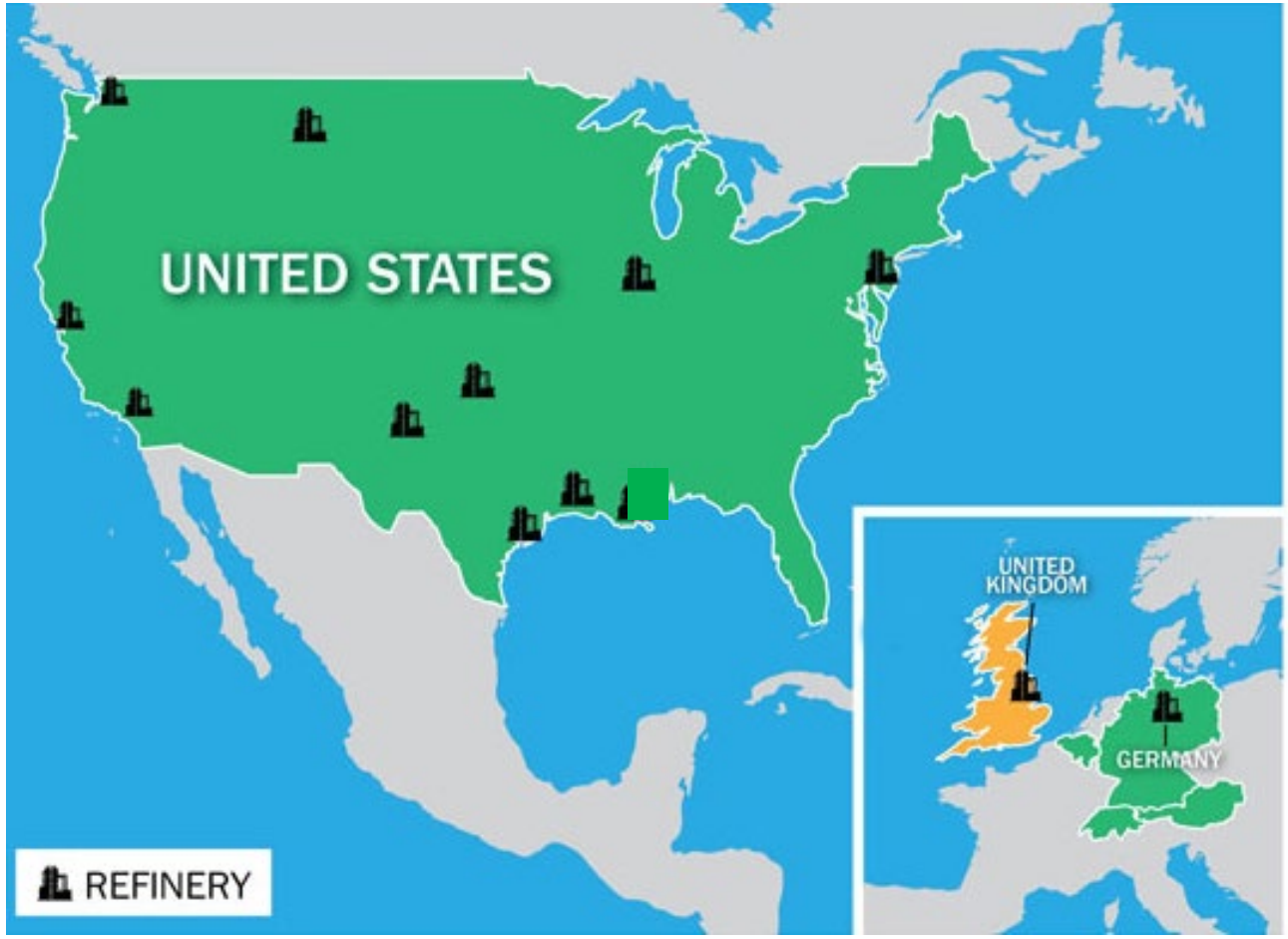
Rodeo Renewable Energy Complex RODEO, CA

# Phillips 66 Refineries and Renewables Facilities

Bayway Refinery
Billings Refinery
Borger Refinery
Ferndale Refinery
Lake Charles Refinery (Excel)
Los Angeles Refinery (Idled)
Ponca City Refinery
Rodeo Renewable Energy Complex
Sweeny Refinery
Wood River Refinery
Humber Refinery (MiRo)



# Providing Energy. Improving Lives.

We help make the products that improve lives and make modern life possible

**Transportation Fuels**
trucks, ships, planes

**Roads**
asphalt, paint

**Agriculture**
fertilizers, insecticides, irrigation pipe

**Housing**
roofing, carpet, insulation

**Electric Vehicles**
batteries, rubber tires, body parts

**Food**
food packaging, refrigerants

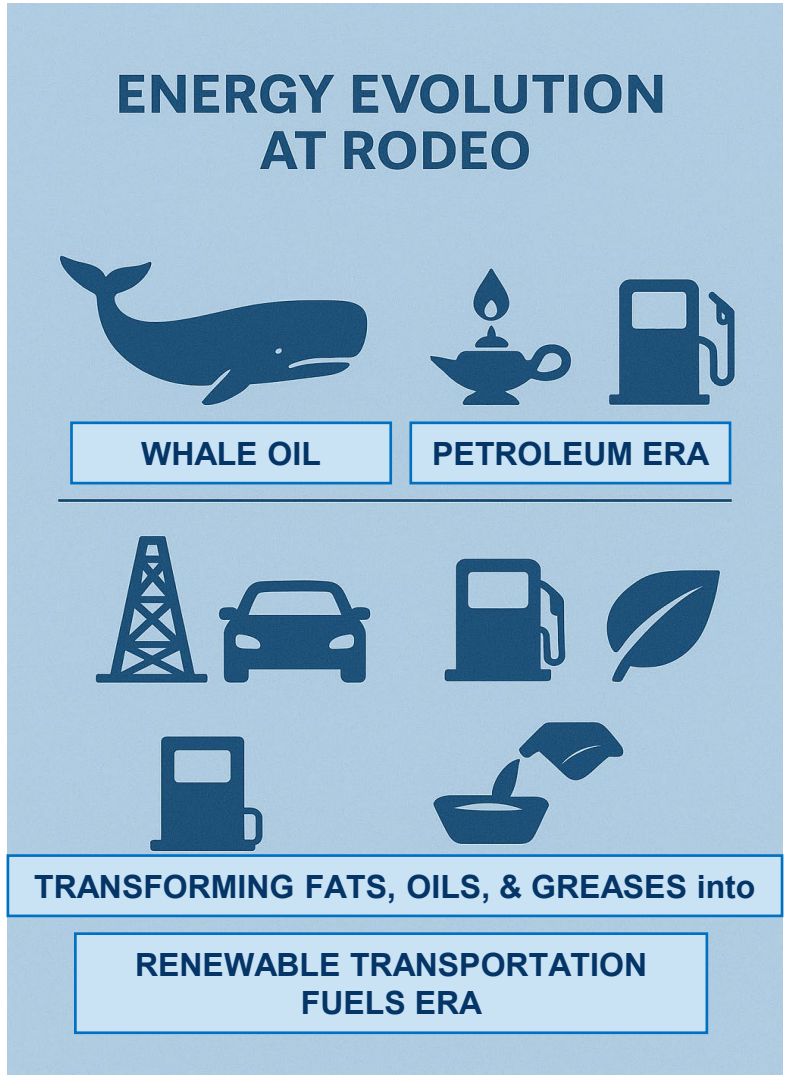
**Personal Care/Clothing**
sunscreen, hand soaps, bodywashes, cosmetics

**Recreation**
ATVs, bicycles, ice chests

**Medical Equipment**
respirators, surgical instruments, stethoscopes, hearing aids

**Technology**
computers, TVs, mobile phones

# Rodeo's Energy Evolution began in 1896




**Origins with Whale Oil**

Rodeo's energy journey began with whale oil used for lighting, reflecting early technology and resource reliance.

**Petroleum Fuels Era**

Petroleum replaced whale oil, bringing kerosene, gasoline, and diesel as key fuels for everyday applications.

**Shift to Sustainable Energy**

Rodeo's recent transition to renewable diesel and sustainable aviation fuel demonstrates commitment to cleaner energy solutions.

# Phillips 66 Rodeo Renewable Energy Complex

- Proudly operating in the Bay Area for 130 years
- Total workforce: ~385 employees, ~225 contractors
- Conversion preserved family wage careers while redefining the facility and creating a sustainable resource in the CA energy market

# Rodeo Renewable Energy Complex

- 800 million gallons per year or ~52,000 barrels per day at full run rates.
  - Renewable Diesel and Sustainable Aviation Fuel (SAF)
  - Feedstock includes used cooking oil, vegetable oils, and fats (no Palm Oil)
  - Renewable hydrogen production from facility gas production

# Rodeo Renewable Energy Complex Conversion Benefits

**REDUCED LOCAL AIR EMISSIONS**

Sulfur Oxides - $SO_x$ – 80% reduction

Particulate Matter - $PM_{10}$ – 20% reduction

Nitrogen Oxides - $NO_x$ - 33% reduction

**REDUCED WATER USAGE**

- 300 gallons per minute or 160 million gallons per year

**PROJECT CONSTRUCTION JOBS**

- Project employed ~900 people for Pre Treatment Unit and associated scope, utilizing local union labor
- Turnaround activities peak ~1,500 people, utilizing local union labor
- ~6 million total hours of construction

**CONTINUATION OF JOBS**

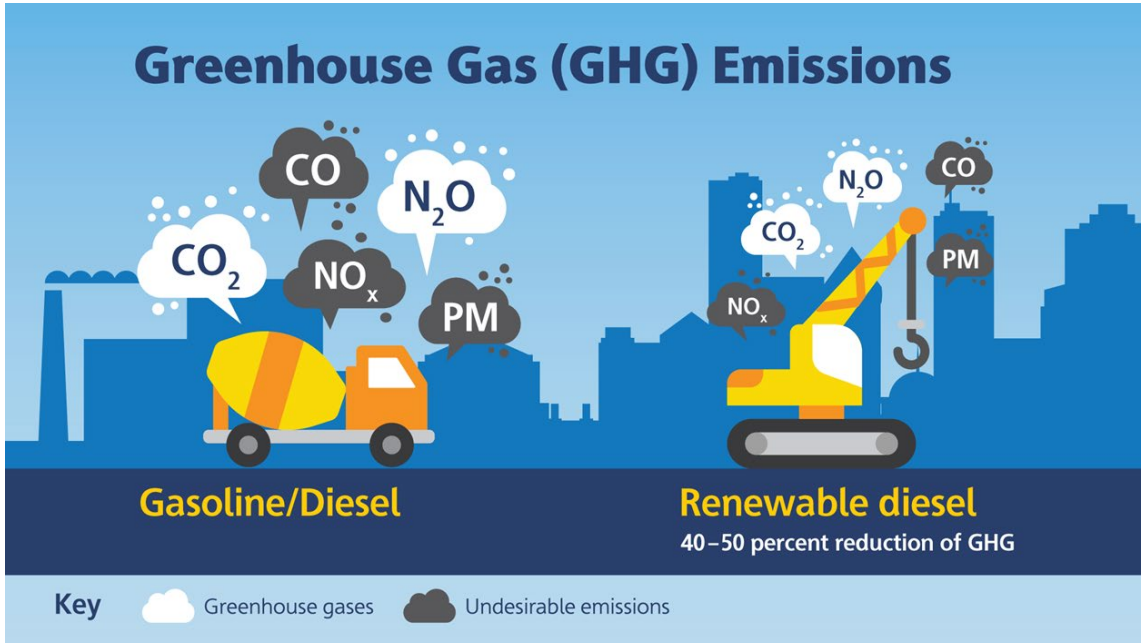
Facility employs approximately 600 renewable energy jobs

**Continuing to provide** high-paying family-wage jobs with healthcare benefits

# Renewable Fuel Benefits

## Renewable Diesel Benefits

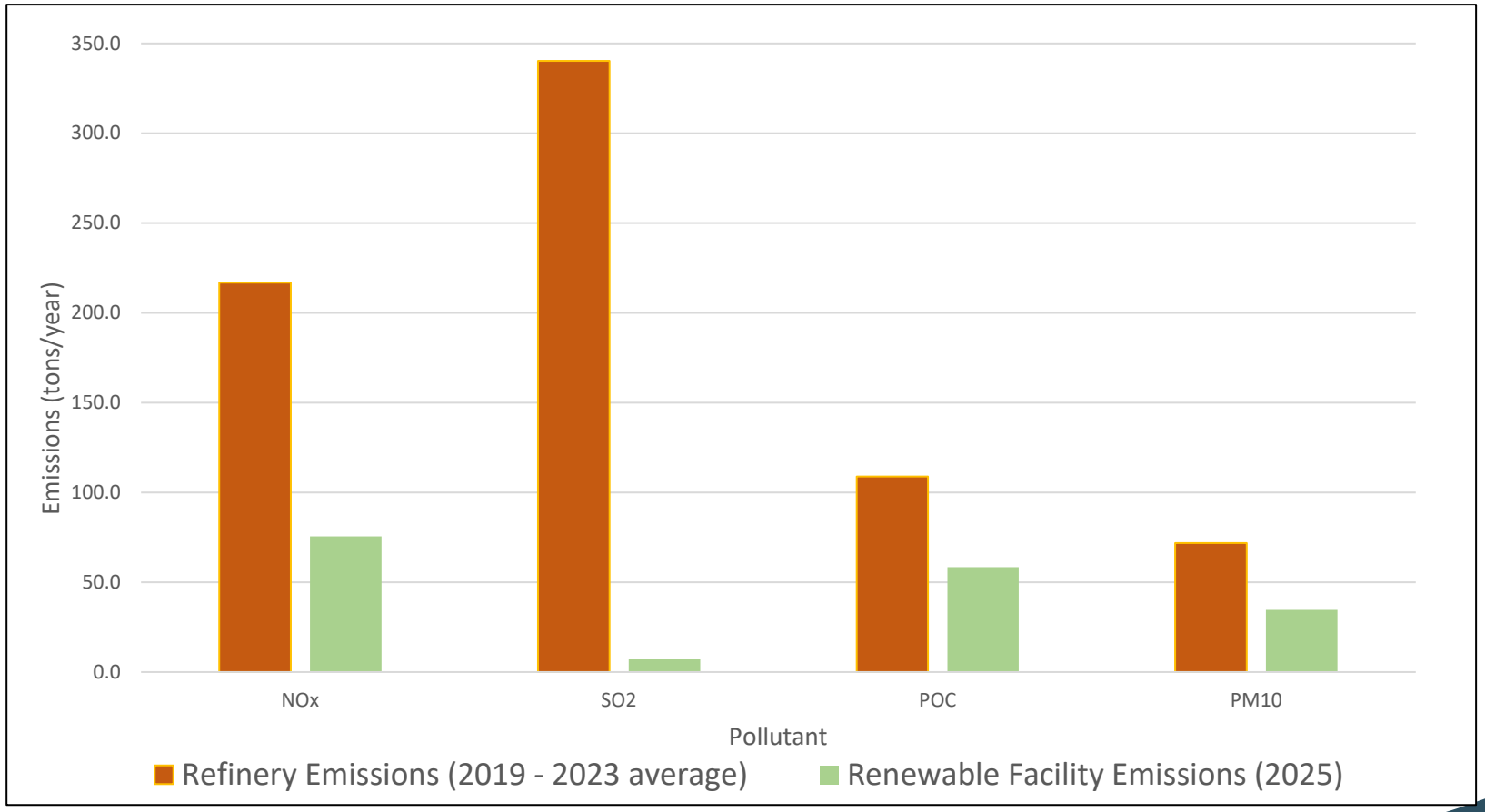
| Emissions | R99 Fuel |
|---|---|
| NOx | -10% |
| Diesel PM | -30% |



Economy and Emissions Impacts from Solazyme Fuel in UPS Delivery Vehicles (energy.gov)

# Criteria Pollutant Emissions

Petroleum Refinery Emissions averaged for 2019 – 2023, Renewable Facility Emissions for 2025.



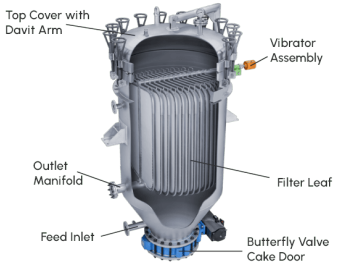

| | Refinery Emissions (tpy, 2019-2023 avg) | Renewable Facility Operation (tpy, 2025) | Percent Reduction |
|---|---|---|---|
| NOx | 217 | 76 | -65% |
| SO2 | 340 | 7 | -98% |
| POC | 109 | 58 | -46% |
| PM10 | 72 | 35 | -52% |

# Process of Making Renewable Transportation Fuels

# Renewable Feedstock Pretreatment

DCO – Distillers Corn Oil
CO – Used Cooking Oil
TT – Tech Tallow (clean)
BFT – Beef Tallow
CWG – White Grease (Pig fat)
YG – Yellow Grease (recycled UCO)
PF – Poultry Fat
SBO – Soy Bean Oil

Untreated Renewable Feedstocks → **Filters** → **Degumming** → **Adsorption** → Treated Feedstocks



# SAF: Aviation’s Immediate Solution

**Significant Emissions Reduction**

SAF can reduce lifecycle greenhouse gas emissions by up to 80%, making a major impact on aviation’s carbon footprint.

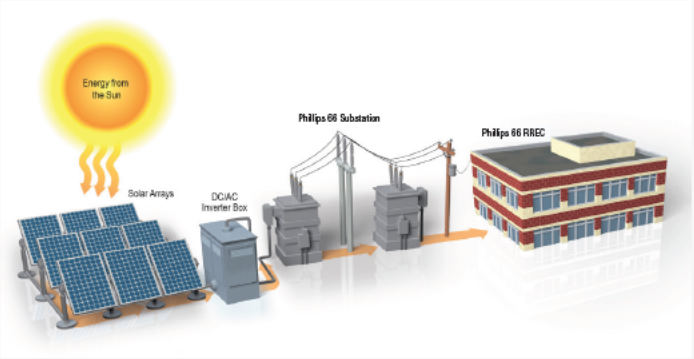
**Practical Decarbonization Solution**

SAF represents the only rapid and practical lever for aviation’s decarbonization to address urgent climate challenges.

# Solar Facility

## How the Phillips 66 Solar Facility Works

As sunlight hits the solar panels, the photovoltaic energy is converted into direct current electricity (DC). The direct current flows from the panels through inverters and is converted into alternating current (AC). Finally, the electricity travels through transformers, and the voltage is boosted for delivery onto the Phillips 66 substation.




- 88 acres of Phillips 66-owned land
- The 30.2-megawatt (MW) facility is capable of generating enough electricity to reduce grid power purchases by 50%
- In service April 2025, producing clean, renewable energy
- Owned and operated by a subsidiary of NextEra Energy Resources, LLC

# Economic & Community Benefits

## SOCIAL IMPACT AT A GLANCE

**Community Investments by Focus Area**

*Data based on 2024 funding.*

**$761K+**
LOCAL FUNDING

**125+**
LOCAL ORGANIZATIONS SUPPORTED

**SINCE 2008 RAISED $2,750,000**
supporting vocational education

**SINCE 2008 RAISED $600,000**
supporting veteran services Walk of Honor for our Veterans

Creating stronger local partnerships, and a shared path to success

EDUCATION CHAMPION AWARD

# Questions?

Rodeo Renewable Energy Complex