

ECOVAPOR ZER₀₂

**Sell More,
Flare Less.**

Putting Out the Flares in the Permian Basin

“Shell has reduced flaring in its Permian Basin operations by 80%. EcoVapor’s ZerO₂ oxygen removal system has played a key role in our flaring reduction efforts.”

- Amir Gerges, Vice President - Permian Shell



The EcoVapor ZerO₂ System Reduces Flaring, Minimizes Emissions and Improves Well Site Safety.

SITUATION

The Permian Basin is the most active oil and gas region in North America. In May 2019, approximately 46% of active rigs drilling onshore in the United States were working in the Permian Basin, more than the next five regions combined. As a result of this sustained development activity, EIA reported in April 2019 that estimated oil production from the Permian Basin had exceeded 4.0 million barrels of oil per day, a new record and approximately four times higher than in 2011. Production growth is good for energy security, but rapidly rising volumes also brings with it a set of new challenges.

All that produced oil has to be stored until it is sold. Many oil and gas producers have adopted the use of oil storage tanks with sealed hatches to help prevent the venting of emissions. In a sealed tank, however, vapors accumulate between the liquid surface and the top of the vessel, causing tank pressures to increase, which presents a safety risk to oilfield workers due to the potential for a rush of higher pressure tank vapor toward an operator when opening a hatch. Since tank vapor gas is rich in valuable Btu content, it is often profitable to recover and sell it, which reduces tank pressures. If the oxygen content of tank vapor gas exceeds pipeline specifications, however, the gas must be flared.

EcoVapor is helping operators in the Permian Basin improve the effectiveness and profitability of their tank vapor recovery systems. When Shell sought a reliable and effective solution to reduce flaring and improve vapor recovery performance, they turned to EcoVapor.

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SOLUTION

EcoVapor's patented ZerO₂ system offers operational flexibility, modularity and reliability. ZerO₂ units can be all-electric, using existing lease power or gensets, are skid mounted and have a small 4'x4' footprint with only one inlet and one outlet, so they can be installed on any production pad. The ZerO₂ is modular, with the ability to run multiple units in parallel to scale-up, or down, as volumes change during the life of a well. With no moving parts, ZerO₂ units are extremely reliable.

Three ZerO₂ units were first installed on a production pad operated by Shell in the Delaware Basin portion of the Permian Basin. Based on success of the initial test, Shell deployed an additional 17 units, bringing the total fleet in service for the company to 20 as of year-end 2018 with nameplate processing capacity of 6.0 MMscf/d. Since then, ZerO₂ processing capacity in service for Shell has increased to 20 MMscf/d and the solution is a component in the standard design for Central Processing Facilities in the Permian.

The EcoVapor ZerO₂ system delivered these benefits to Shell:

- ▶ Contributed to reduced flaring in the Permian Basin by approximately 80%.
- ▶ Avoided emitting 75 kilotons of CO₂e in greenhouse gasses in 2018, the equivalent of 15,924 passenger vehicles driven for one year or CO₂ emissions from burning 80 million pounds of coal. (Source: U.S. Environmental Protection Agency Greenhouse Gas Equivalencies Calculator).

Additional ZerO₂ benefits include:

- ▶ Allows the consistent capture of gas by removing oxygen from the production stream and ensuring high uptime, uninterrupted production and revenue by avoiding unscheduled shut-ins.
- ▶ Increases revenue and profits by capturing and selling rich, high-value tank vapor gas previously lost by flaring or combusting.
- ▶ Enhances well site safety through reducing tank pressures and potential vapor exposure by capturing and selling tank vapor gas.
- ▶ Maintains operational reliability by adopting the ZerO₂ units, which have no moving parts and minimizes the impact on unexpected maintenance and repair costs.
- ▶ Futureproofs production sites using ZerO₂ units from increasingly stringent regulations on oilfield emissions.

**Contact us today at 1-844-NO-FLARE (844-663-5273) or
Info@EcoVaporRS.com to see if ZerO₂ is right for your
operations and if you're ready to Sell More, Flare Less.**

