



Low-producing, high-polluting oil and gas well sites

Low-producing well sites account for less than 5% of production, but account for about half of oil and gas methane waste and pollution. Cutting methane emissions – the main component of natural gas – from oil and gas production is commonsense and will stop the needless waste of American energy, protect our air, and cost-effectively address climate change.

Low-producing oil and gas well sites have an average production of 15 barrels of oil equivalent per day or less. These wells account for about half of all methane waste and pollution from oil and gas in the US.

There are over 550,000 low-producing well sites in the country, representing 84% of all active US onshore well sites. However, these sites account for a very small share of national production – just 4.5% of oil, 4.4% of gas, and 4.4% of combined oil and gas production. In addition, ownership data show that these low-producing sites are overwhelmingly owned by large companies.

Who really owns low-producing well sites?

While some have portrayed low-producing well site owners as universally small businesses or “mom and pops” who can’t afford to take steps to reduce emissions, the data tells another story.



A low-producing well site in Utah's Uinta Basin.

The vast majority of low-producing well sites are owned by large companies with the resources to deploy commonsense solutions to reduce energy waste and stop pollution.

EDF analysis of Enverus production and operatorship data shows that:

- A small handful of very large companies dominate ownership of the nation's low-producing well sites. These 72 companies, defined as owning over 1,000 operating well sites, control nearly half of low-producing well sites. More than three-fourths of low-producing well sites are owned by companies with more than 100 active well sites.
- Very small companies, or those with fewer than 10 sites, control just 3% of low-producing well sites.

Figure 1: Low-producing well site ownership profile

Number of low-producing well sites per operator	Percentage of low-producing well sites owned
Less than 99	20.6%
100-999	32%
1000 or more	47%

An outsized source of pollution

Although low-producing well sites account for less than 5% of the nation's oil and gas supply, scientific research and a US DOE study underscore that they are responsible for about half of the industry's methane emissions. Several recent peer-reviewed studies focused on low-production well sites support this finding:

- For the very low production category of 0-1 boed wells that contribute just 0.2% and 0.4% of national oil and gas production, respectively, research in the Appalachian Basin estimate that wellhead methane emissions account for 11% of the production-related methane emissions in the EPA's Greenhouse Gas Inventory.
- The same research observed that many low-producing wells emit as much or more gas than they reported producing – in a region where natural gas is the primary product operators are aiming to sell.

- According to University of Texas at Austin research, low-producing, conventional wells in the Appalachian region have ~200X higher loss rates than unconventional wells (18.3% vs 0.09%) and account for 63.5% of the region's total oil and gas methane emissions.
- In West Virginia, researchers found that wellhead methane emissions from low-producing wells were 7.5 times larger than EPA's estimate, with an average methane loss rate of 8.8% of production leaked at the wellhead.
- Based on a preliminary analysis of recent site-level measurements in the Permian Basin, the nation's largest oil field, nearly half of observable production site methane emissions are from low-producing well sites.



Low-producing well site located in Pennsylvania.
Photo credit: Earthworks

Defend Health and Climate. Stop Waste.