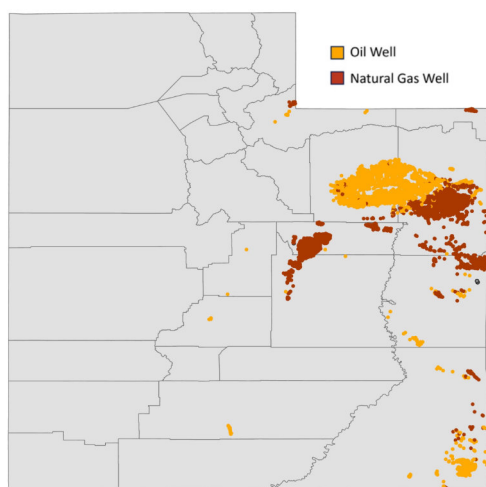


Methane Waste and Pollution in Utah

Fossil fuel producers in Utah are wasting energy resources in the form of methane. In doing so, they're harming the climate, public health, and the economy.

Methane waste problem

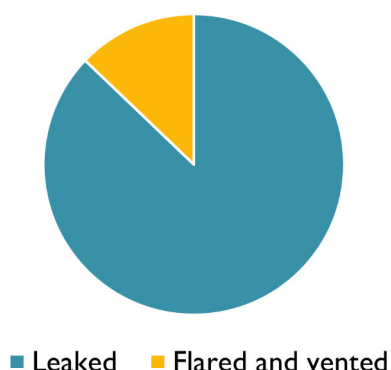
The primary component of natural gas is methane, which is a potent greenhouse gas. When methane is wasted through venting, flaring, and leaks, it means less natural gas is brought to market to sell for energy use. In 2019, Utah had approximately 12,540 actively producing oil and gas wells.



The scope of the problem in Utah

In 2019, fossil fuel producers wasted 16 billion cubic feet of gas in total: 87% by leaking and 13% by flaring and venting.

Lost Natural Gas by Source



The impact of wasted gas in Utah

Economy: Natural gas waste takes an economic toll. In 2019, Utah saw \$48 million of gas wasted—enough to meet the annual needs of more than a fifth of the residential gas customers in the state. Eliminating venting and flaring alone would provide enough natural gas to supply 26,300 households. Oil and gas operators also avoid paying taxes and royalties on wasted gas, so federal, state, and tribal governments lose revenue. In 2019, the lost potential revenue amounted to \$6.7 million. In Utah, this revenue would go to a variety of programs, including public K-12 and post secondary education, abandoned well reclamation, and the state General Fund.^{1,2,3}

Air quality: Oil and gas production sites emit volatile organic compounds (VOCs) and hazardous air pollutants alongside methane that worsen air quality and harm public health. These VOCs contribute to the formation of ground-level ozone, also known as smog, which exacerbates asthma and other respiratory diseases and can lead to heart attacks, strokes, and other cardiovascular harm. In addition, oil and gas production releases toxic pollutants such as hydrogen sulfide, toluene, xylene, and benzene. Exposure to these pollutants can lead to serious public health impacts, including increased incidence of cancer.⁴

EDF found that air pollution in 2016 from the oil and gas sector in the US resulted in \$77 billion in total health impacts. In Utah in 2016, this air pollution was responsible for 8 deaths per million and 1,040 asthma exacerbations per million among children.⁵

Climate: Methane is a greenhouse gas over 80 times more powerful than carbon dioxide at trapping heat in the near term and is responsible for at least a quarter of today's global warming.

¹ <https://history.utah.gov/repository-item/trust-lands-administration-sitla/>

² <https://tax.utah.gov/utah-taxes/oil-gas-severance>

³ <https://tax.utah.gov/utah-taxes/oil-gas-conservation>

⁴ <https://iopscience.iop.org/article/10.1088/2752-5309/acc886>

⁵ <https://blogs.edf.org/energyexchange/2019/11/21/new-study-finds-elevated-health-risks-due-to-pollution-from-oil-and-gas-activity-in-colorado/>



Photo courtesy of Scott Sandberg c/o NOAA

Lost revenue from wasted gas

Sources of Government Revenue: Governments receive revenue from gas extraction through royalties and taxes. The sources of revenue depend on land ownership:

Private lands: Utah collected a severance tax of approximately 4% and a conservation tax of 0.2% on gas extracted from private lands in 2019. Private land owners may also assess a royalty rate on leases on their lands.

Tribal lands: Royalty rates can vary on tribal lands. EDF, TCS, and Synapse decided to use 12.5% as the royalty rate for tribal lands based on interviews with federal staff. In Utah, the Navajo tribe also collects a 4% severance tax and the Ute tribe collects a 10% severance tax on gas extracted from their lands.

State lands: Utah collects royalties of 16.67% from state leases on School and Institutional Trust Lands and 12.5% on leases in other areas. The state also collects severance and conservation taxes on gas extracted from state land.

Federal lands: The federal government collects royalties on gas extracted from federal lands. In 2019, the royalty rate was 12.5%. The federal government returns 49% of this revenue to states. The state also collects severance and conservation taxes on gas extracted from federal land.

Volume of Wasted Gas by Land Type: In 2019, 47% of the wasted gas was lost from federal lands, 14% from state lands, 13% from tribal lands, and 27% from private lands.

Amount of Lost Revenue: Wasted gas resulted in the following lost potential volume and value by source:

Source of Wasted Gas	Volume of Wasted Gas (Bcf)	Value of Wasted Gas (2022\$)
Leaking	13.9	\$41,809,000
Flaring and Venting	2.0	\$6,164,000
Total	15.9	\$47,973,000

The following revenue could have been collected from royalties and taxes if the gas had not been wasted:

Level of Government	Revenue Lost (thousands \$2022)		
	Total	Leaking	Flaring and Venting
Federal share of federal royalties	\$1,423	\$1,420	\$2
State	\$4,050	\$3,803	\$247
State taxes	\$1,590	\$1,380	\$210
State royalties	\$1,093	\$1,059	\$35
State share of federal royalties	\$1,367	\$1,364	\$2
Tribal	\$1,261	\$1,053	\$208
Tribal Taxes	\$477	\$409	\$68
Tribal royalties	\$784	\$644	\$140

Benefits of policy action

Strong, commonsense rules to cut methane waste and pollution will help slow the rate of climate change happening today, protect public health, create jobs, generate additional tax revenue, and prevent the needless waste of domestic energy resources.