How to Curb Wasteful Flaring:

Wyoming's opportunity to protect its citizens and maximize revenue

The people of Wyoming know the value of a healthy environment and a robust, growing economy; we know that we must always work hard to protect both.

We can curb the flaring of natural gas by capturing it instead and sending it to market. Wyoming has an opportunity to increase revenue from oil production and at the same time improve our air quality and protect human health.

At least 3.9 billion cubic ft. of natural gas was flared in Wyoming during 2014. That's…

…enough fuel to heat as many as 11,000 homes for a whole year.

…worth $17 million at the hub, over $1 million in severance taxes, and $6 million in state/federal royalties.

…the BTU equivalent of 661,762 barrels of oil.

…the volume produced from 48 average Sublette County gas wells in 10 months.

A step in the right direction

Initiative 4F of Governor Mead's Energy Strategy calls for a Regulatory Review and Recommendations for Flaring:

"Wyoming will review its flaring rules and regulations […] Opportunities for using excess gas for power generation, or in other ways, will be explored."

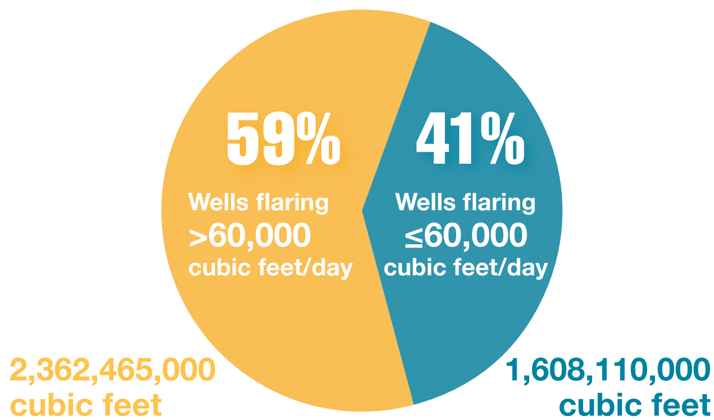
"If [oil companies] don't find a location to put that gas into a sales pipe and send off to market, then they should anticipate not producing that oil that's associated with it."

—Oil and Gas Commissioner Tom Fitzsimmons in an interview with Wyoming Public Media, November 19, 2014

What Is Flaring and Why Does it Happen?

Flaring is the common, yet often-unnecessary practice of burning associated natural gas during the process of extracting oil, and, at times, natural gas. As oil is produced from a well, natural gas also flows out of the well in various amounts depending on the geologic formation being drilled and other factors. Because this associated gas is not the product oil companies are seeking, and because the current price of natural gas is low, many companies make the business decision to flare the gas rather than to establish a system to collect it.

Natural Gas Flared Statewide
3.9 billion cubic feet
From Jan.–Oct. 2014



Flared Natural Gas: Haste Makes Waste

Every day in Wyoming, oil companies burn or "flare" tens of thousands of dollars worth of natural gas throughout the state. This is natural gas that, with foresight and proper planning, could be heating homes, fueling on-site equipment, and providing severance and royalty tax dollars to the state to benefit our schools and citizens.

Based on an analysis of Wyoming Oil and Gas Conservation Commission data, in the 10 months from January to October 2014, almost 4 billion cubic feet of natural gas was flared. That's enough gas to fuel as many as 11,000 Wyoming homes[1]—the equivalent of nearly every household in Gillette—for an entire year.[2] Even when natural gas prices are low, as they were in 2014, the volume of gas flared in those 10 months was worth about $17.8 million as it came out of the ground, and it would have been worth more than triple that amount if sold at residential prices.[3] That is more than a million dollars in potential severance taxes burned and wasted in just 10 months.[4]

The volume of flared and wasted gas has the potential to be even larger because the Wyoming Oil and Gas Commission's rules[5] allow companies to flare up to 60,000 cubic feet of gas per day, per well without having to seek approval. The rules presuppose that 60,000 cubic feet per day generally does not constitute "waste." But of the 3.9 billion cubic feet of gas flared during the first 10 months of 2014, 41 percent (1.6 billion cubic feet) of that volume was from wells that flared fewer than 60,000 cubic feet per day. Conservatively, in 2014, there was an average of 1,500 wells flaring gas throughout the state each month.[6] If each well flared at the maximum allowable amount (60,000 cubic feet per day), the annual volume flared would be roughly 32 billion cubic feet.[7] That's significant and would be allowed by the current rules.

Clean Air Is a Wyoming Value Worth Protecting

Aside from the loss of a non-renewable resource and tax revenue to the state, flaring is also a significant source of pollution. Burning nearly 4 billion cubic feet of natural gas annually produces more than 200,000 tons of carbon dioxide (CO_2). In addition to releasing CO_2, when natural gas is burned at the well it is not pure. Other pollutants that are released into the air include carbon monoxide (CO), sulfur dioxide (SO_2), and nitrogen oxide (NO_x); depending on efficiency, flares may also include hydrocarbons and soot.[8]

The Bottom Line: Flared Gas Is Lost Forever

Flared gas isn't going to heat a house or fuel a stove to prepare dinner, or produce electricity. And even worse, Wyoming does not earn its fair return on flared gas because it is exempt from the state severance tax. When the gas is burned, only the environmental impacts and unrealized revenues are left behind.

"'Do we want development or do we want to preserve the environment?' The fact is that we want both, and we need both. [...]we have to maintain our commitment to having both."

Governor Mead in his Energy Strategy, *Leading the Charge: Wyoming's Action Plan for Energy, Environment and Economy*

The Good News: We Can Curb this Wasteful Practice for Everyone's Benefit

Legislative Solution

Remove the severance tax exemption currently granted to flared gas.[9] A severance tax is already levied on natural gas extracted for production. Flared gas should also be taxed. The exemption provides the wrong kind of incentive to companies who should install infrastructure to capture the gas and bring it to market. Wyoming and its citizens shouldn't lose a valuable resource without compensation simply to benefit a few companies' short-term interests. With proper planning, infrastructure that captures natural gas can even become a cost benefit to companies.

Administrative Solution

Current Wyoming Oil and Gas Conservation Commission rules do not require associated gas collection. Operators can flare unlimited amounts for the first 15 days following drilling, and 250,000 cubic feet per day for the first 6 months. After 6 months, the rules allow an operator to flare as much as 60,000 cubic feet of gas per day per well forever. The rules allow an operator to flare larger volumes upon request and with the Commission's approval. An improved rule that requires a planning process for gas infrastructure and/or onsite use would dramatically reduce wasted gas and lost revenue.

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1 U.S. Energy Information Administration: One average Wyoming Household uses 358,750 cubic feet/year

2 U.S. Census Bureau Data 2013: Gillette, WY has 11,138 households

3 Energy Information Administration data on price at the Opal Hub in 2014: $4.49/MCF, Residential: $14.83/MCF <http://www.eia.gov/state/print.cfm?sid=wy>.

4 The severance tax on natural gas is 6%. 6% of $17.8 million is $1,068,000.00.

5 Oil and Gas Conservation Commission Rules, Chapter 3, Section 39

6 Based on 10 months of Oil and Gas Conservation Commission data in 2014, the average number of wells flaring 60,000 cubic feet per day or less is 1,668/month. We assume a conservative average of 1500 wells flaring > or = to 60 MCF (60,000 cubic feet) per day.

7 Based on 10 months of Oil and Gas Conservation Commission data in 2014, the average number of wells flaring 60,000 cubic feet per day or less is 1,668/month. Assuming a more conservative average of 1500 wells flaring at or below the 60 MCF per day threshold, the 12 month sum of 60,000 cubic feet per day * 1500 wells * the number of days in each month (28, 30 or 31) is 32.85 billion cubic feet possible if 1500 wells flared the allowed 60,000 cubic feet per day.

8 U.S. Environmental Protection Agency <http://www.epa.gov/ttnchie1/ap42/ch13/final/c13s05.pdf>.

9 Wyoming Statute 39-14-205(j)

Frequently Asked Questions

Is it feasible to require collection or use of associated gas?

Yes. Alaska and North Dakota are two energy-rich states that have chosen to require gas collection in order to reduce—or in the case of Alaska nearly eliminate—flaring of associated gas. Infrastructure availability is the largest hurdle to this requirement, but this is where proactive planning plays a crucial role. North Dakota now requires companies to submit infrastructure plans before applications for permits to drill can be approved. And Alaska has prohibited flaring almost entirely since 1971; the state's regulations prohibit flaring except in emergencies and testing.

What would Wyoming have to do to prevent the loss of revenue that results from flaring?

With the right incentives and requirements from the state, companies could start to prioritize gas collection. In order for necessary infrastructure to be available, planning must happen ahead of the drilling process. Currently, because there are no requirements or tax incentives to capture associated gas, many oil companies in Wyoming don't do the advance planning that is so urgently needed to ensure the construction of gas collection infrastructure.

Isn't flaring necessary for safety?

In limited cases, yes. For instance, as a well is being drilled, flaring may be necessary to protect the safety of workers at the site since the venting of highly flammable methane could pose an explosion hazard. But aside from these limited circumstances, foresight and proper planning would allow associated natural gas to be used to fuel equipment at the well-site or be shipped to market and sold for the benefit of the company, the state, and the consumer.

What government bodies are responsible for regulating the oil and gas industry?

The Wyoming Oil and Gas Conservation Commission is the primary agency responsible for regulating oil and gas operations in the state. The agency is responsible for handling the drilling permit process as well as enforcing the state's oil and gas regulations and statutes—including the prevention of waste. The Legislature creates oil- and gas-related statutes, for instance in the form of severance tax charges. And the Department of Environmental Quality plays a role in granting some air and water quality-related permits, for example Chapter 6, Section 2 oil and gas permits.

Is flared natural gas exempt from the severance tax charged on other natural gas production?

Yes. Wyoming Statute §39-14-205 currently exempts flaring from the 6 percent severance tax charged on other natural gas extraction. That means companies extracting oil can, if they choose, dispose of natural gas by burning it off free of charge.

Is associated natural gas a marketable product?

Yes. Associated natural gas could be collected and transported to market or used to fuel equipment on site. What's missing is proper planning before the drilling process starts to ensure that the gas has a place to go other than a flare stack once it comes up the well-bore.

What's the difference between venting and flaring and why have I heard flaring is environmentally friendly?

For safety reasons, the Wyoming Oil and Gas Conservation Commission no longer allows venting—the practice of directly releasing raw and potentially explosive methane into the atmosphere, although a rule that prohibits venting has yet to be formalized. Through the practice of flaring, methane is converted to CO_2, a relatively less potent greenhouse gas. From an environmental standpoint, flaring is better than venting, but flaring is not without significant impacts to air quality and human health. An even better way to address the management of associated gas is to avoid flaring altogether.

Wyoming Outdoor Council

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