

Briefing North Sea operators waste gas worth millions through continued venting and flaring

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Summary

Oil and gas companies operating in the North Sea wasted enough gas to heat over 700,000 homes in 2023. This could have supplied every home in Kent. The figure represents a lost market value of £250 million, and shows little improvement compared to 2022.

Operators are taxed heavily for the resources they bring to UK shores, but the gas they release straight into the atmosphere is not taxed. Since natural gas is mostly methane, a potent greenhouse gas, this is both an economic waste and a significant source of untaxed pollution.

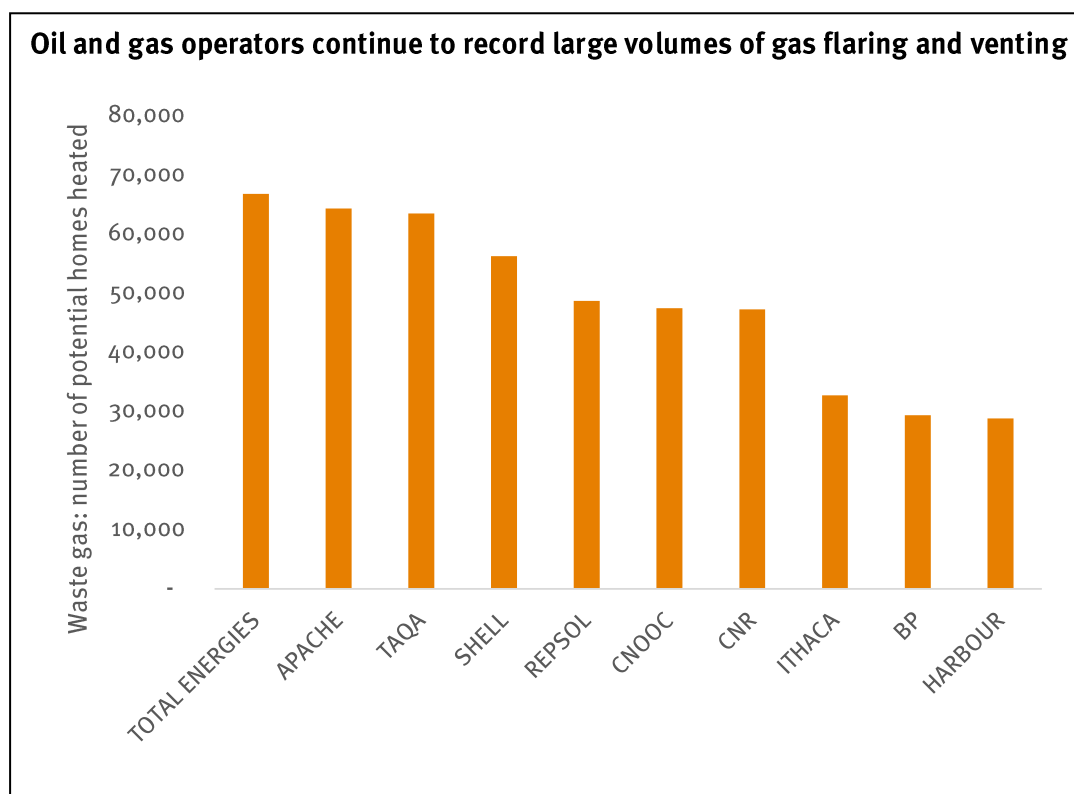
Flaring and venting of gas continues

Oil and gas companies continue to waste gas extracted from the North Sea. In 2023 enough gas was lost to heat over 700,000 homes.¹

The wasted gas comes from venting (releasing methane into the atmosphere) and flaring (burning methane) at offshore platforms and onshore terminals. Technology exists to capture most of the wasted gas, but most operators are not using it.

The total volume of wasted methane in 2023 could have supplied all households in Kent for the year.² At the 2023 market price for gas of £1.02 per therm, this wasted resource is equivalent to a lost market value of over £250 million.³

The operator Total Energies was responsible for the highest amount of wasted North Sea gas, equivalent to heating 67,000 homes for a year. This was followed by Apache (64,000 homes) and TAQA (63,000 homes).⁴



The practice of routine venting and flaring methane is extremely wasteful, particularly during a time of high energy prices when many people are struggling to afford to heat their homes. Beyond these economic concerns, the environmental impact is also severe.

The global warming effects of methane are around 80 times more intense in the short term than CO₂. Reducing methane emissions is one of the fastest and most cost effective strategies to [limit global temperature](#) increases to within 1.5°C. This underscores the urgent need for stricter regulations on venting and flaring.

Unlocking new revenue through a tax on methane emissions

Although many countries, including the UK, have introduced carbon taxes to encourage businesses to reduce their greenhouse gas emissions, targeted levies on methane emissions from venting and flaring are less common. Such measures are increasingly being adopted by other countries as part of broader strategies to combat climate change but have not yet appeared in the UK. Most recently, the US Environmental Protection Agency has implemented [a fee on methane emissions](#) by oil and gas companies. Companies that emit more than 25,000 metric tonnes of methane per year will face a fee of \$900 per tonne, rising to \$1,500 per tonne in 2026.

The UK's North Sea neighbour Norway is the world leader in minimising methane emissions and wasted gas. There, in 2023, tax rates of NOK 2,700 (£197) per tonne of gas flared and NOK 20,800 (£1,510) per tonne vented were [levied](#) on oil and gas operators. These measures generated [NOK 7.9 billion](#) (£580 million) in revenue for the Norwegian government in 2023.

Implementing a methane tax on vented emissions from North Sea oil and gas operators could generate significant revenue for the UK Treasury. If a tax at the US rate of \$900 per tonne was applied to all gas vented as methane in UK waters, operators would be liable for almost £11 million in fees. At the Norwegian rates, this would be almost £23 million.

A methane tax should incentivise better capture and use of wasted gas. If this successfully ended the routine venting of methane, the resulting revenue would disappear. However, this would be more than replaced by existing taxes on the gas being brought to market rather than wasted.

Routine flaring and venting should be banned before 2030

The [Offshore Energies UK](#), the UK's industry trade body, report a steady decline in venting and flaring in offshore activity from 2018 to 2021. However, the latest industry data reveals slower progress on reducing emissions, with the amount of methane vented and flared in 2023 only 2.4 per cent lower than in 2022.⁵ This stagnation comes despite the industry committing to achieving zero routine flaring and venting by 2030 or sooner.

The oil and gas industry has a track record of backtracking on its environmental commitments. In 2000, companies promised to [end](#) routine flaring in Nigerian oil projects before 2010, but Nigeria is still [eighth](#) in the world for volume of gas flared. Now many of the same companies promise to do this in the North Sea [by 2030](#). The Institute for Energy Economics and Financial Analysis has [argued](#) that the lack of incentives to reduce flaring and venting means voluntary reduction targets have little impact.

To prevent the industry backsliding on progress, we recommend accelerating the timeline for the 2030 ban on routine flaring and venting, turning the voluntary ban into law to ensure accountability, and introducing a tax on wasted gas.

The oil and gas industry must clean up its act

The UK has an opportunity to reinforce its role as a climate leader by addressing stagnation in the reduction of methane emissions, which has plateaued since 2015. Without action to change this, the risks of reaching critical climate tipping points grow, with potential irreversible and

dangerous consequences for society. To accelerate progress, the government should:

- set a more ambitious timeline to end routine flaring and venting of methane by oil and gas operators, advancing the current target from 2030 to 2027, and enshrine this end date in law to increase industry accountability and prevent backsliding;
- introduce a methane tax or include methane in the UK emissions trading scheme to discourage venting;
- implement robust leak detection and repair (LDAR) requirements, following Norway’s example of monthly inspections or the US approach of quarterly detection at major sites (regular LDAR procedures will further reduce wasted gas and methane emissions).

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Endnotes

¹ The volume of gas flared in 2023 was 691 million cubic metres, according to the North Sea Transition Authority’s *Emissions monitoring report 2024*. Gas vented is estimated to make up three per cent of the 12.9MtCO_{2e} industry wide emissions, or around 0.39MtCO_{2e}. Using a global warming potential (GWP100) of 28 for methane, and a methane fraction of natural gas of 0.924, we therefore estimate that the total volume of vented gas in 2023 was 22.8 million cubic metres. Ofgem considers the average medium sized home in the UK to consume 11,500 kWh of gas each year, and from this a total of 705,000 homes worth of wasted gas is estimated.

² Kent had 648,000 households in 2021, according to the Office for National Statistics, ‘Population and household estimates, England and Wales: Census 2021’

³ We find a mean wholesale price for UK natural gas between 1st January 2023 and 1st January 2024 of 102 pence per therm, according to tradingeconomics.com/commodity/uk-natural-gas

⁴ Data on venting and flaring volumes by individual platforms is available from the North Sea Transition Authority’s ‘[Emissions dashboard](#)’.

⁵ North Sea Transition Authority, 2024 op cit