Quick Take:

New Gas Flaring Data: Important Findings Important Questions

A Capterio Perspectives article

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EXECUTIVE SUMMARY

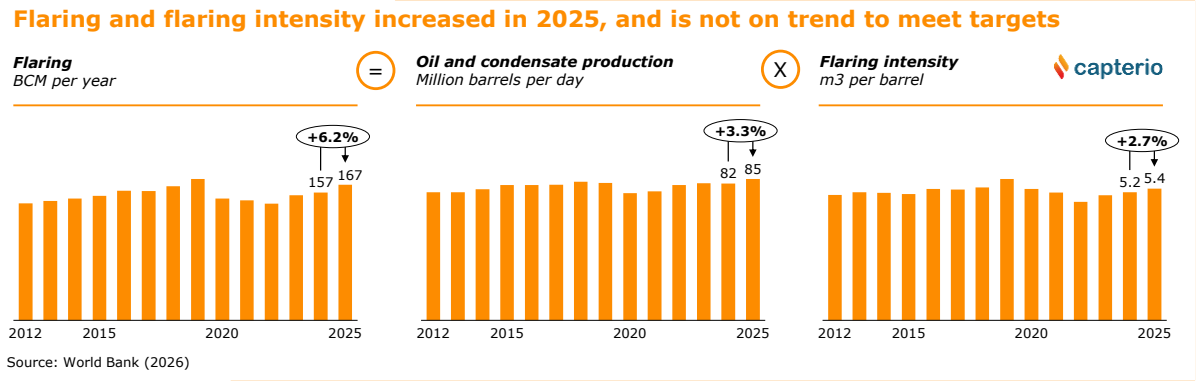
The World Bank's latest *Global Gas Flaring Tracker* reports a further increase in flaring during 2025. The headline figure is moving (again) in the wrong direction and helps explain why, just days earlier, UN Secretary-General António Guterres used London Climate Action Week to call for greater action on methane and routine flaring. Better data and faster action are increasingly becoming two sides of the same coin.

Our annual reflections (combined with our own insights) include:

- **The latest *World Bank Global Gas Flaring Tracker* shows a substantial increase in flaring during 2025 compared with 2024, both in absolute terms and in flaring intensity. Its latest estimate of global upstream and LNG flaring is 167 BCM, up 6% on 2024. Given global commitments to reduce flaring, these findings are disappointing.**
- **Less obviously, the report also substantially rewrites the historical record of global flaring through a major methodological update. We welcome these important improvements, even though they imply that historical flaring has not only been overstated in the USA by around a factor of two, but also understated globally by around 7%. The revised methodology increases estimated cumulative global flaring between 2012 and 2024 by 127 BCM – equivalent to around 10 BCM per year, or roughly the 2025 flaring of Mexico.**
- **Flares are also a significant source of methane emissions through incomplete combustion. But our analysis of the report suggests that when so-called "methane slip" is more realistically accounted for, not only is the amount of gas effectively lost through flaring probably understated by the World Bank, but the associated methane emissions are likely 6–16 times higher than default standards assume. We suggest that this highlights the urgency of (re)focusing methane efforts on gas flaring.**
- **Given the significant delay between annual inventories and the actual flaring, an alternative and more timely perspective is provided by Capterio's independently developed FlareIntel platform, designed to support oil and gas companies, governments, financial institutions and others. Our results, first published in January, show broad agreement with the World Bank's latest findings and reinforce the conclusion that, despite increasing commitments, global progress remains limited.**
- **Our dataset and reports go further. They also indicate that the majority of global flaring is "routine" in nature and has shown little improvement over time, calling into question the likelihood of achieving Zero Routine Flaring by 2030.**
- **Overall, the World Bank's annual inventory report reinforces why better data matter. But achieving faster emissions reductions (and delivering routine flaring elimination) will increasingly require timely, asset-level intelligence that enables companies and governments to identify, prioritise and address flaring while action is still possible.**
- **Capterio's FlareIntel platform tracks every flare, at every asset, in every country, for every company, every day. Our approach provides enhanced characterisation through features such as real-time cloud correction and automatic classification of flares as routine or upset. Timely intelligence helps companies and governments target interventions, create value, strengthen energy security and reduce emissions.**

Introduction

The World Bank, on June 23, published its latest *Global Gas Flaring Tracker report*[1] for data from 2012 to 2025, and the headline message is clear: we continue to progress in the wrong direction. Global gas flaring reportedly reached 167 billion cubic meters (BCM) in 2025, rising by 6% to the highest level since 2019 and the third consecutive annual increase. Given that underlying crude and condensate increased by 3%, the resulting "flaring intensity" (a measure of operational performance) similarly increased, by some 3%.



Unless the increases in flaring were due to either an increase in combustion efficiency of flares, or a reduction in the proportion of unlit flares (neither of which we can rule out – although they seem unlikely given the IEA's Methane Tracker[2] report suggests methane emissions have increased), these findings are disappointing. Especially so, given a growing number of commitments, initiatives and corporate pledges, overall progress remains limited. The biggest changes in flaring were in Russia, Mexico, Iran and Libya, albeit offset by small reductions in USA and India.

However, perhaps the most significant aspect of this year's report is not the latest annual data, but the extensive revision of historical data resulting from a major methodological update[3] that brings the World Bank's methodology – and flaring estimates – more in line with that independently developed by Capterio and already being used for the last 3 years.

Probably the most important insight from their changed methodology is that the relative positioning of flaring in the US is pushed down (from rank #4 in 2024 in the prior dataset to rank #9 in both 2024 and 2025 datasets). Beyond this, globally flaring overall by some 7% over the period 2012-2024 (adding in 1 new "Mexico" – or 10 BCM) per year on average. In particular, flares previously above 20 million scf/day are generally increased, whereas those below this (almost all flares in the USA) decrease.

We applaud the methodological changes, especially since they are based on sound science, including controlled source testing. But the changes are also an illustration of not only the complexity of the science but also the process by which data are updated.

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[1] https://thedocs.worldbank.org/en/doc/b34e0c054bb3fe3695e70154c28eef3f-0400072026/original/Global-Gas-FlaringTracker-June-23-2026.pdf

[2] https://www.iea.org/reports/global-methane-tracker-2026

[3] Which was signalled in a webinar in January 2026 https://thedocs.worldbank.org/en/doc/43de8569fc1177910d45ebe22fa126bc-0400022026/original/MASTER-Deck.pdf

An Important Independent Perspective

Given all the changes, it is helpful and timely to review the alternative approach taken by Capterio, a UK-based flare solutions company. Our gas flare tracker also uses satellite detection of thermal anomalies resulting from gas flaring, over multiple bands of infrared radiation. Our algorithm, developed in part with the support of the UK Space Agency, has several methodological innovations compared to that developed originally by US agency NOAA and provides an independent assessment of the global figures for 2025.

Significantly, rather than being annual in nature (and 18 months in arrears), our platform computes and publishes data to our clients every day at 0600 local time, just hours in arrears. This timely computation enabled us to publish our initial assessment of 2025 flaring on 3rd January 2026 (some 6+ months ago), coupled with an academic paper.

While the precise methodologies are somewhat different, they do rely on the same fundamental sources and a similar methodology processed (in our case) 24-7 by a high-performance compute facility. Nevertheless, both methods embed a crucial assumption – that combustion efficiency of real-world flares is the same of that of the calibration dataset, being 98%. In the real world this is probably unlikely and the impact of this is discussed below.

Many of the broad conclusions from our own study are similar to those of the World Bank, including:

- Firstly, that flaring is not heading in the right direction. Our figure is almost identical to the World Bank in 2024 (<1% difference) and was 5% lower for 2025. We therefore share the same cause for concern.

- Secondly, our league table is broadly similar to the World Bank's (we calculate that 81% of volume is from the same countries, in order: Russia, Iran, Iraq, Venezuela, Mexico, Algeria, Libya, Nigeria and the USA). The World Bank attributes 88% to these countries and places Libya ahead of Algeria. *Most importantly, the US ranks #9 after the methodological change, meaning US flaring was substantially overstated in all prior years by the World Bank with a 48% reduction. Our figures agree with this new estimate of US flaring and we have for several years been concerned about a possible overstatement.*

- Thirdly, the global increase is driven by more flaring in Russia, Libya and Mexico (concurring with the World Bank), but (in a difference to the World Bank), we see this offset by reductions in Iran, Venezuela and Ecuador.

However, our research paper (submitted for review on 12 June and published in pre-print[4] on 22 June) notes some important differences:

- Since we track and report *daily* flaring data within hours of detection, plus we[5] conduct real-time synchronous cloud correction, our figures sum to annualised figure and can be reported almost instantly.

- Our data enables us to differentiate between "routine" and "upset" flaring. We find globally the vast majority of all flaring is "routine". This finding contrasts with the impression often created by self-reported datasets by endorsers of the World Bank Zero

[4] https://chemrxiv.org/doi/full/10.26434/chemrxiv.15005027/v1
[5] See https://flareintel.com/insights/new-year-new-resolutions-for-improved-security-and-value-creation-through-lower-flaring

Routine Flaring initiative that "routine" flaring is 30% of all flaring[6].

Whilst it could be that the assets involved in this reporting (which are only the *operated* assets of endorsing companies) have better performance than the rest of world, we suggest that the difference is likely definitional. Companies are likely using different interpretations of "routine" flaring. Either way, the data suggests that achieving the goal of Zero Routine Flaring by 2030 will require a much greater pace of implementation than has been seen to date.

- However, the total volume of gas sent to flare (which will always exceed the volume actually combusted) is likely to be underestimated – both by the World Bank and by us – because both methodologies necessarily assume, in the absence of better information, that the average combustion efficiency of flares is 98%, reflecting controlled-source testing. If real-world combustion efficiency is lower, the implications are material.

  If the true average combustion efficiency were 90% rather than the assumed 98%, then – because the observed heat release, and therefore the *combusted* gas volume, remains unchanged – the total volume of gas sent to flare would *increase* from 167 BCM to around 181 BCM. Assuming, as the World Bank does, that 80% of this gas is methane, methane emissions from flaring would increase to 14.5 BCM, equivalent to around 9.9 million tonnes of methane per year. Depending on the Global Warming Potential (GWP) applied, this equates to 290–810 million tonnes of CO2-equivalent emissions from methane alone (at a GWP of 100- and 20-years respectively). This is substantially higher than the 50 million tonnes CO2-equivalent estimated by the World Bank (using a 100-year GWP) – a factor of a minimum of 6 times lower. Total greenhouse gas emissions from flaring (combining carbon dioxide from combustion with methane from incomplete combustion) could therefore increase from around 400–500 million CO2-equivalent tonnes to 700-1,200 million CO2-equivalent tonnes. While we consider an average combustion efficiency of 90% to be plausible – and note that the IEA's *Methane Tracker* implies a broadly similar value – it remains a key area for further research.

  These findings have two potentially important implications. First, emissions from *methane slip* from gas flaring may be underestimated by a factor of 6 (or even 16, if a GWP over 20 years were used – and we think this GWP should become the standard) suggesting that flaring is a significantly larger contributor to global methane emissions than is generally recognised. Second, improving flare combustion efficiency alone could reduce greenhouse gas emissions by hundreds of millions of tonnes of CO2-equivalent each year, even before considering flare gas recovery. While much current policy attention is focused on methane leaks, we suggest that greater emphasis should also be placed on gas flaring, where a single intervention can simultaneously reduce methane emissions, carbon dioxide emissions and wasted energy from a concentrated point source.

Unpicking the differences

We very much appreciate the change in the World Bank's methodology which is framed around three major developments. Firstly, they now use more satellites (until 2025 only 1 was used), secondly, the "flare catalogue" is more consistent between years, and thirdly their calibration is now based on controlled-source testing at an academic experimental facility conducted 6 years

[6] https://www.worldbank.org/en/programs/zero-routine-flaring-by-2030/reporting

ago. We are pleased to report that our approach was built with these improvements embedded from day 1 when we independently developed our algorithm and workflow, some 3.5 years ago.

Nevertheless, important improvements should be welcomed. However, they also illustrate how rapidly the science of satellite-based flare monitoring continues to evolve in what is, as experts can attest, a highly complex subject matter[7].

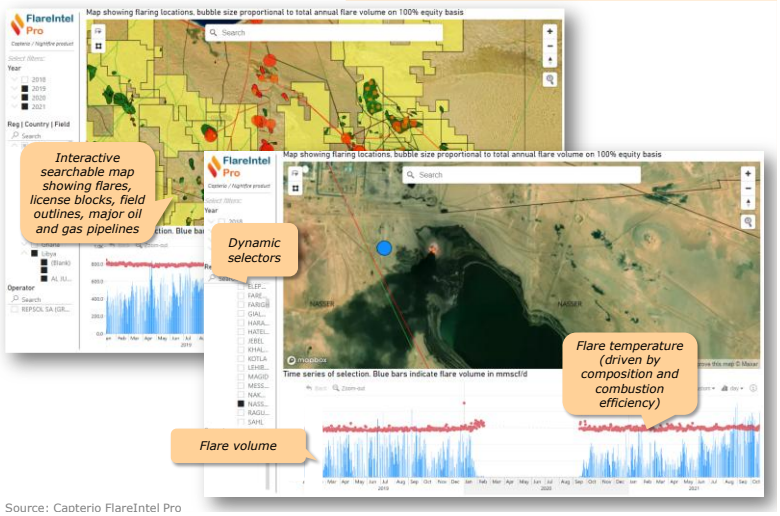
What is particularly notable (and the most likely cause of their higher figure vs ours) is that the World Bank data now has some extremely large flares. The largest, a flare in the Iraq's West Qurna 2 field (of which the photo from earlier this year is one example) reportedly flares *an average of* 266 million scf/day (which is 500 thousand pounds of methane per hour or 2.7 BCM in a year) – burning close to $500 million per annually[8]). Whilst flares some flares can take this level of peak volumes, we find it unlikely that such a flare would operate continuously. Equally, if true, this flare would be larger than the total reported flaring of several major producing countries.

Equally, the top 2 flares in the world, for example, now apparently flare more than the whole of the USA, and the top flare more than the whole of Saudi Arabia. These figures look implausible to us, and we would welcome scrutiny (especially since our method generally reports data with an error of less than 10-15% against the actual data shared with us by clients).

How high frequency and timely data drives impact

Our core belief is that high quality data delivered direct to those who make operational decisions on a real-time basis is essential to drive real-world impact.

As such, our FlareIntel platform provides rich and actionable data that is used by our clients to improve visibility of flaring (especially for non-operated assets), drive operational performance interventions (especially since much of the "upset" flaring is due to equipment malfunctions) and identify and prioritise investment opportunities (see figure, left).



Source: Capterio FlareIntel Pro

Key differences in our FlareIntel platform are that the data is daily not annual, asset-level not country, actionable rather than retrospective and set in context (contextual maps of fields, pipelines, powerplants, refineries, LNG plants).

[7] See also: https://www.oxfordenergy.org/publications/flaring-from-oil-and-gas-upstream-operations-is-it-a-lost-cause/

[8] At a notional US$ 5 per mmbtu

Examples of real-world impact include:

- Answering questions such as "which flares show the most promise for being fixable and what would the technical and commercial solution be?"
- Helping leadership drive performance and practice for operated and non-operated assets alike (see our "out of bounds" paper), powered by our real-time alerts service, direct to the decision makers
- Showcasing successful flare capture opportunities (ref extended case study papers)
- Identifying attractive investment opportunities that capture flared gas, improve energy security, bolster exports and lower emissions (ref "Libya opportunities" paper).
- Finding opportunities to meet regulations on imported LNG (ref an SPE paper on "Flaring at LNG plants")
- Supporting investors and shareholders to ask the right questions (ref "Investor Advantage" paper with a 5-part guided framework)

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Ultimately, better data and faster action are two sides of the same coin. Annual inventories remain indispensable for measuring long-term progress, but capturing the value of gas that is currently wasted through flaring – strengthening energy security, creating economic value and reducing emissions – will increasingly depend on timely, operational intelligence that enables intervention while opportunities still exist. Such visibility will also be essential if industry is to deliver on commitments such as Zero Routine Flaring and meet increasingly stringent (European) methane regulations.

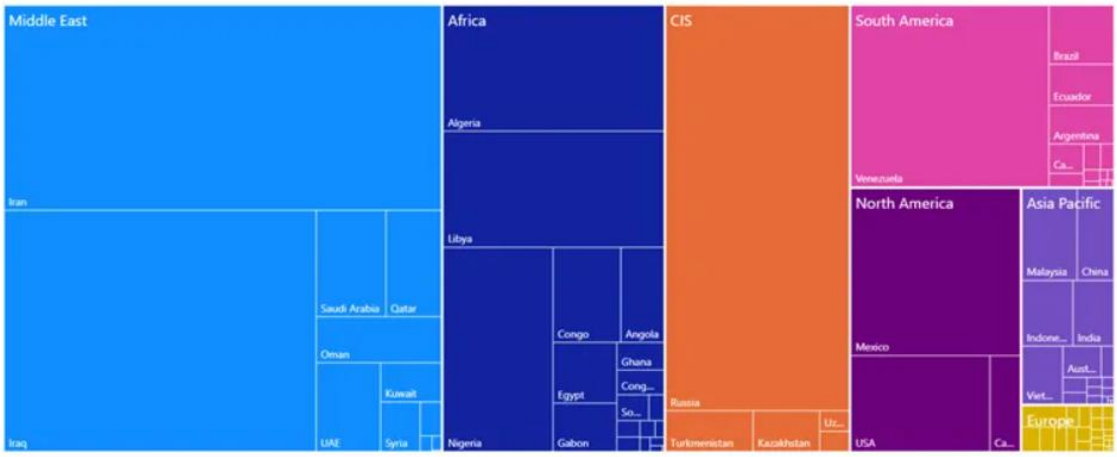

Figure: volume of gas flaring in 2025 by country and by region. Flaring is notably very high in some of today's more challenging countries, including Russia, Iran and Venezuela. Source: Capterio FlareIntel's platform.

Above: a figure from our report of January 3, 2026 which reflected on the global flaring in 2025.