



Environmental
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BUSINESS

FLARING UPDATE

Latest World Bank data
shows trouble for 2030 goal

April 2023

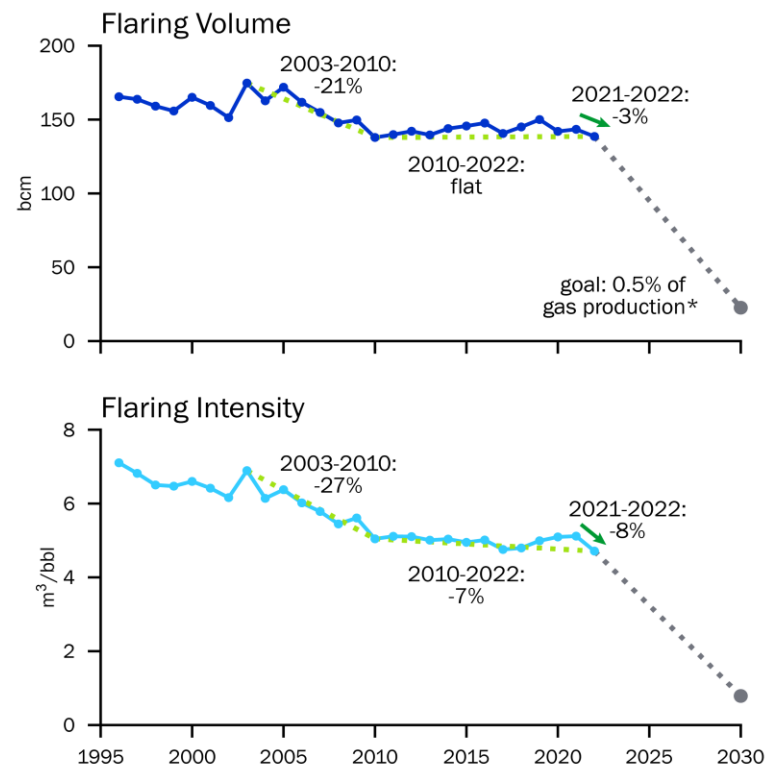


Summary

- The World Bank's Global Gas Flaring Tracker [report](#), published annually each spring, estimates global oil & gas flaring activity based upon observations from satellites launched in 2012 and 2017.
- This year's tracker indicates that **flaring activity remains too high** and is not on track to reach the World Bank's goal of zero routine flaring by 2030.
- **Global flaring activity fell by 3% last year**, from 144 to 139 bcm. This decline comes despite a 4% *increase* in global oil production.
- In addition to being a source of CO₂ emissions, **flaring is a major source of methane emissions** through the venting of methane when flares do not function properly.
- Over the past year, company reports indicate that **Oxy** has eliminated routine flaring from all U.S. operations, **Exxon** has eliminated routine flaring in the Permian, and **bp** has reached a flaring intensity of less than 0.5% in the Permian.

1. Flaring intensity declined by 8%; more progress needed

- Last year's 3% decline to 139 bcm of gas flared occurred despite a 4% increase in global oil production.
- Lower flared volumes amid higher production means that **flaring intensity declined 8%**, from 5.1m^3 to 4.7m^3 of gas per barrel of oil produced.
- Last year's decline follows a small increase in 2021. Flaring volumes are essentially unchanged since 2010. This contrasts with a steep decline in flaring volumes in the previous decade.
- Flaring would need to decline 20% per year to reach zero routine flaring ($<1\text{ m}^3/\text{boe}$) by 2030.



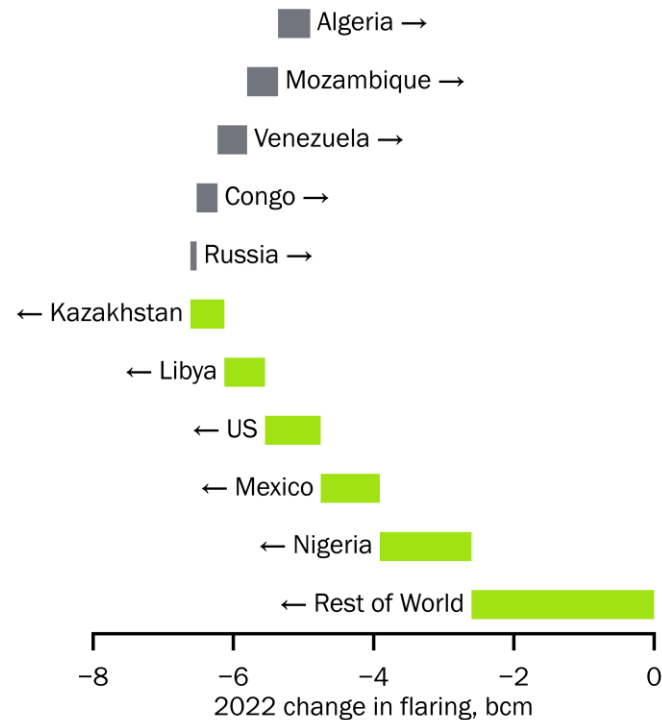
*calculated using projected 2023 oil & gas production values from Rystad UCube.

2. Progress in Nigeria, Mexico, US

The decline in flaring was driven by a few key countries:

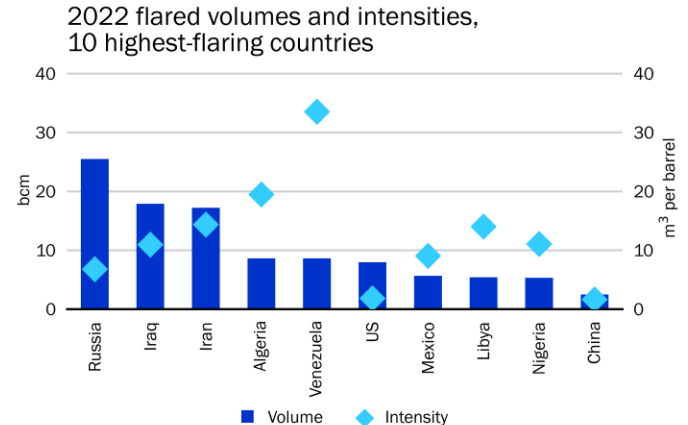
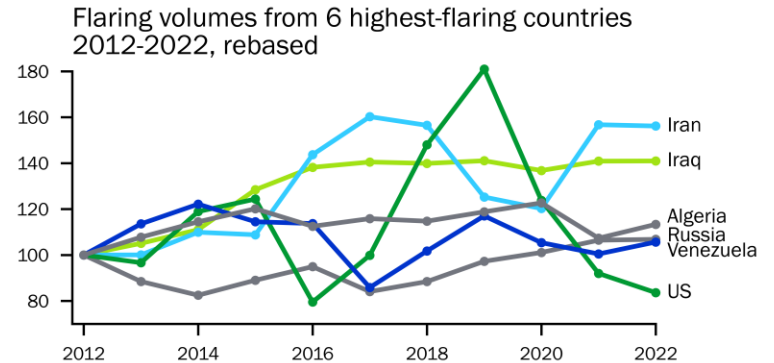
- **Nigeria** saw a big decrease (20%), partly because of 14% lower production, but intensity also fell modestly (though still high at 11.1 m³/bbl).
- Flaring in **Mexico** fell 13%. The World Bank notes that these reductions occurred in the offshore KMZ and Akal fields and in the Cactus conventional oil field onshore and are a result of the shutting-in of wells with high gas-to-oil-ratios.
- Flaring reduction in the **US** continued apace (9% decrease) amid surging production. Intensity fell sharply to a 10y low of 1.8 m³/bbl.
- Flaring rose modestly in **Algeria** and **Mozambique**.

Total Flaring Decrease by Country



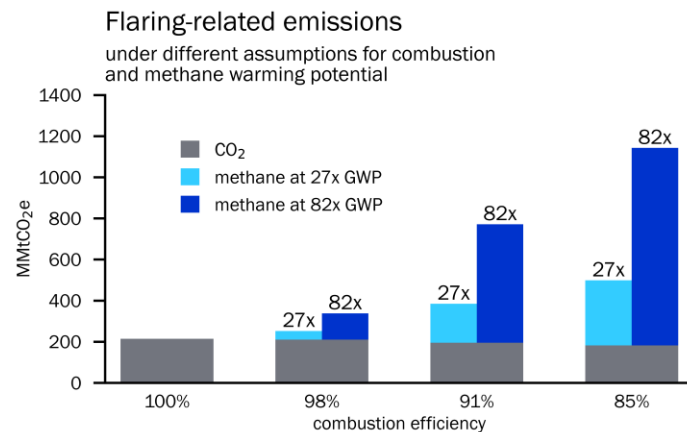
3. Flaring stubbornly high in many countries

- Russia, Iraq and Iran stand out as the top flaring countries, representing 25% of global volumes. In all three, flaring has risen or stayed flat in recent years.
- In **Russia**, despite the closure of the Nord Stream pipeline last summer, flaring intensity was stable at 6.8m³/bbl.
- **Venezuela** remains the country with the highest flaring intensity at over 30m³/bbl - 8 times the global average.
- The US fell from 4th to 6th place in flaring volumes; Algeria's increase moved it to 4th place.



4. Impacts are undercounted

- Flaring contributes to climate change through both carbon dioxide emissions and methane releases and wastes a valuable energy resource.
- Flaring emission estimates may significantly undercount the problem. Research in the US Permian, Bakken, and Eagle Ford formations find an effective flaring efficiency of 91.1%, well below the 98% that is generally used in modelling exercises.
- Particulate emissions from flaring create a health risk for nearby communities. NO_x and VOCs contribute to the development and exacerbation of asthma, as well as the formation of ground-level ozone.



Lit flare (L) and unlit flare (R) as seen from an R44 helicopter via infrared camera.



Still taken from video footage.
Photo credit: PermianMAP

5. Tracking corporate commitments

The past year has seen some new corporate commitments on flaring, as well as improved disclosures from large oil companies, most notably:

- **Oxy** reported eliminating routine flaring from all U.S. operations, and **Exxon** reported eliminating routine flaring in the Permian;
- **bp** reported a flaring intensity of less than 0.5% in the Permian;
- **Pioneer** and **Conoco** committed to eliminate routine flaring by 2025.

US EPA's comment period on proposed oil and gas methane regulations resulted in [historic support](#) from industry, including comments from Chevron, bp, Devon, Exxon, Oxy, and Pioneer.

	Commitments			Disclosures		
	ZRF30 Global	ZRF25 Permian or global	Flaring intensity target	Flaring volumes	Flaring intensity	Routine flaring
Majors	bp	✓	✓	✓	✓	✓
	Chevron	✓		✓	✓	
	ConocoPhillips	✓	✓		✓	✓
	Eni	✓	✓		✓	✓
	Equinor	✓			✓	✓
	ExxonMobil	✓	✓	✓	✓	
	Repsol	✓			✓	
	Shell	✓	✓		✓	✓
	Total	✓			✓	
	Independents	Apache		✓	✓	✓
Devon Energy		✓		✓	✓	
EOG Resources		✓			✓	
Hess		✓	✓	✓	✓	
Occidental		✓	✓		✓	✓
Pioneer		✓	✓	✓	✓	
NOCs	CNOOC Ltd					
	Petrobras	✓			✓	
	PetroChina					
	Rosneft	✓			✓	
	Saudi Aramco	✓				✓

Orange shading = policy change since July 2022



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Further Reading
The Burning Question:
How to Fix Flaring

Plugging the Leaks: Investor Guide
to Oil & Gas Methane Risk

<https://business.edf.org/esg>