

It Pays to Know Your Oil and Gas

The OCI+ puts powerful insights on the climate intensity of the world's oil and gas resources at your fingertips

Despite being treated the same in the market, no two oil or gas resources are equal in their climate footprints. Our cutting-edge interactive web tool — the Oil Climate Index plus Gas (OCI+) — finds that these fossil fuel resources can vary by as much as five times in their life-cycle emissions intensity, as depicted below. There is an even greater difference in the industry's emissions responsibility depending on how oil and gas are extracted, processed, refined, and transported.

Ranges of Life-Cycle Emissions Intensities Vary Widely by Resource Category

Emissions Intensity (kg CO₂e/boe)

● Minimum ● Production weight average ● Maximum

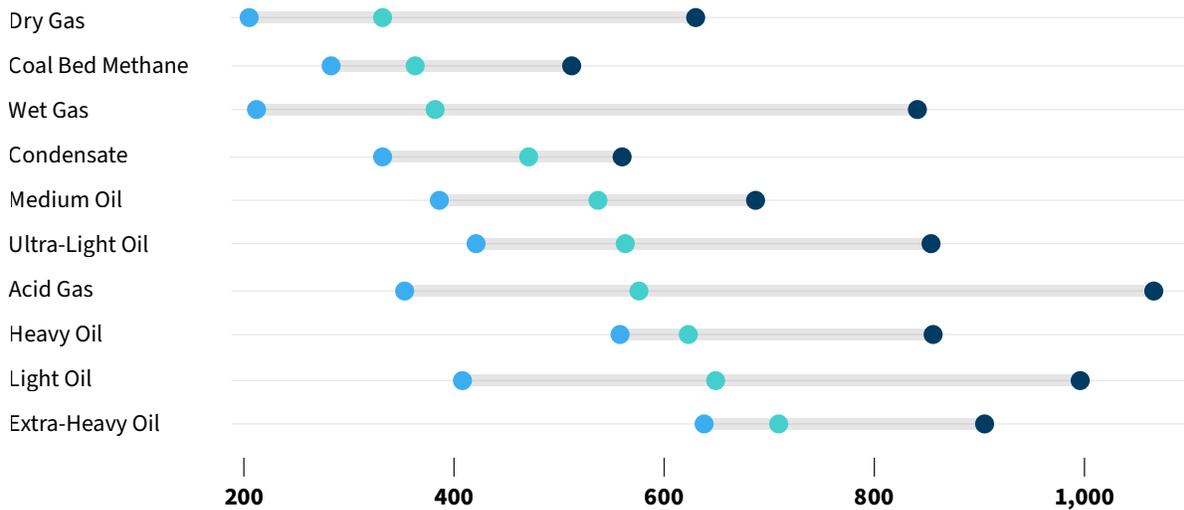


Image from Know Your Oil and Gas: Generating Climate Intelligence to Cut Petroleum Industry Emissions, RMI, 2022, <https://rmi.org/insight/kyog/>

Note: Compares the range of life-cycle emissions intensity estimates from upstream, midstream, and downstream operations (Scope 1, 2, and 3 emissions) of 135 modeled oil and gas resources, assuming 20-year global warming potentials for methane and other short-lived climate pollutants as reported by the IPCC in AR6.

The OCI+ transparently assesses the emissions from one-half of the world's oil and gas supplies. This climate intelligence reveals new opportunities to make the oil and gas currently flowing through our global economy as low-emitting as possible in alignment with 1.5°C climate goals. The OCI+ model can be used by policymakers, corporations, academics, and civil society to cut greenhouse gas emissions now as we reduce dependency on these fossil fuels for a carbon-free future.

A summary of our key findings follows:

- **Open-source data is critical for market changes to accelerate climate alignment in the oil and gas sector.** Oil and gas transparency is seriously lacking. Major data issues continue to arise, including inconsistent and unverifiable self-reported data, data that cannot be published without companies' permission, and government limitations to collecting data. These issues present roadblocks to climate action, because we cannot manage what we do not measure.

- **Differentiating oil and gas emissions presents new climate policy and market opportunities.** The share of emissions from oil and gas production, refining, processing, and shipping can rival that from petroleum end-use consumption. In other words, cutting the supply-side emissions of oil and gas is as important in the short term as reducing consumer demands. The OCI+ offers decision makers tools to strategically cut emissions and can activate powerful market forces that align price signals with climate goals.
- **Cutting methane is the highest priority for the oil and gas sector.** On average, methane accounts for over one-half of oil and gas operational emissions. Climate risks can be immediately cut by avoiding leakage of this potent greenhouse gas, which is over 80 times more climate forcing than carbon dioxide over its decade-long lifetime. Therefore, analyzing oil and gas using a 20-year global warming potential is imperative in this decisive decade, when a majority of nations have pledged to cut methane 30 percent by 2030.
- **Strategically managing highly emitting oil and gas resources requires targeted climate action.** Analyzing heterogenous oil and gas impacts offers companies, investors, policymakers, and civil society actors greater climate intelligence to safeguard our planet now as we reduce global dependence on fossil fuels.

The OCI+ is a collaboration between RMI, Stanford University, University of Calgary, and Koomey Analytics. Numerous researchers, students, and institutions have been involved since the Oil Climate Index was first released in 2015 at the Carnegie Endowment for International Peace. RMI has re-launched the updated OCI+. Our new analysis confirms that oil and gas emissions intensities are highly varying. Our findings also underscore the need to evaluate this sector using a 20-year global warming potential (GWP) given its large volume and the high potency of methane. The climate intelligence provided by the OCI+ can help align the oil and gas sector with global climate targets as the clean energy transition accelerates in this decisive decade.

Importance of Using GWP₂₀ to Assess Oil and Gas Life-Cycle Emissions Intensities

Life-Cycle Emissions Intensity (kg CO₂e/boe)

● 20-year industry GHG responsibility ● 100-year industry GHG responsibility

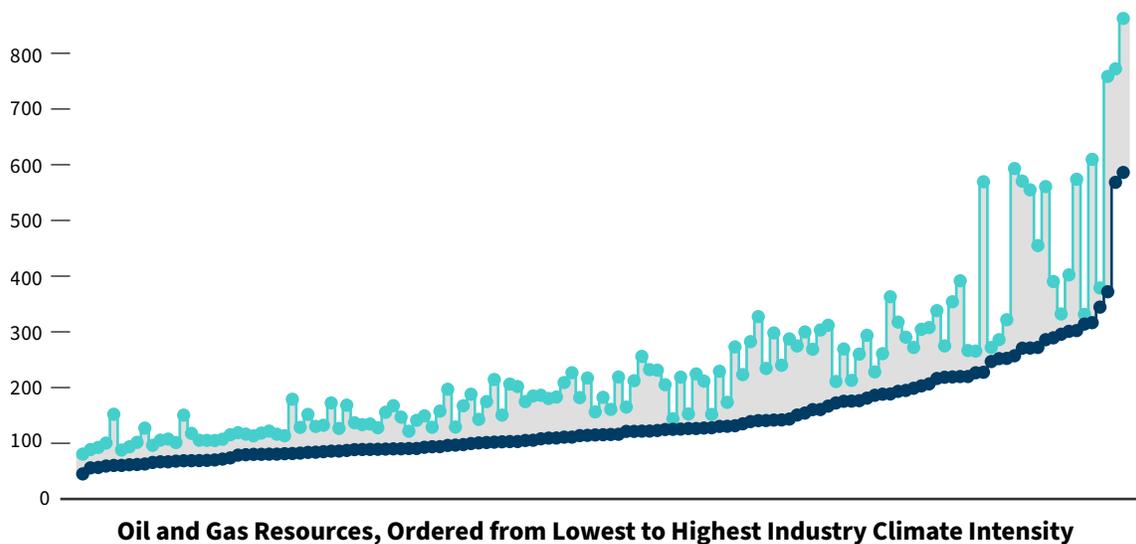


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Note: "Industry GHG Responsibility" refers to emissions from the upstream, midstream, and transportation components of the oil and gas life cycle.

Additional Resources

[OCIplus.RMI.org](https://ociplus.rmi.org)

[RMI.org/insight/kyog/](https://rmi.org/insight/kyog/)

[NoStandardOil.com](https://nostandardoil.com)

