It Pays to Know Your Oil and Gas

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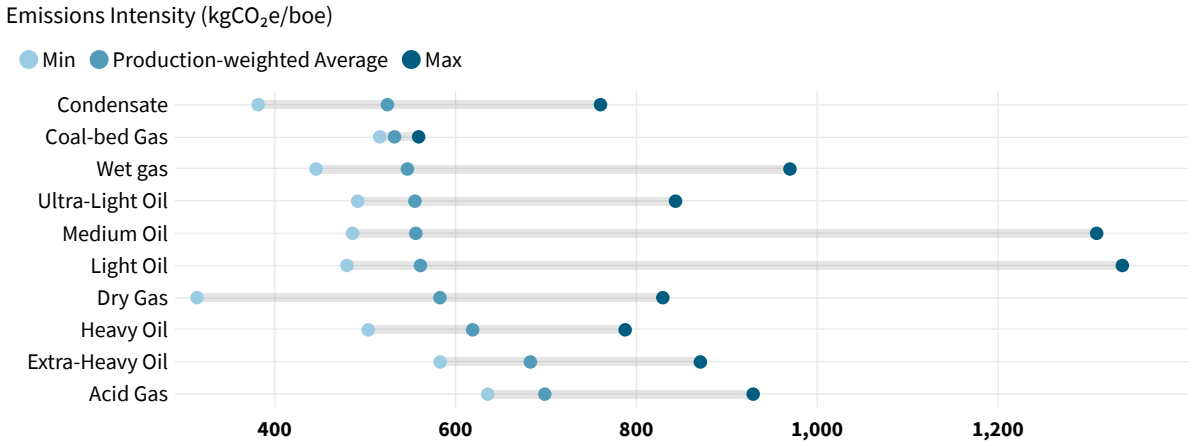
The OCI+ puts powerful insights on the climate intensity of the world's oil and gas resources at your fingertips

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



Source: OCI+ lifecycle emissions intensity estimates using 2023 data inputs for all global oil and gas assets modeled, August 2024.

Note: Assumes 20-year global warming potential for methane

Now that RMI is modeling all global O&G assets, we are gathering greater climate intelligence that reveals new opportunities to make the oil and gas currently flowing through our global economy as low-emitting as possible in alignment with climate goals. The OCI+ model can be used by policymakers, corporations, financial actors, 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:

- **Public data is critical for market changes to accelerate climate alignment in the oil and gas sector.** Oil and gas transparency is seriously lacking. The OCI+ uses public and purchased input data. Data issues continue to arise, including inconsistent and unverifiable self-reported emissions data by companies and countries, input data acquisitions that are costly and cannot be shared publicly, 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 industry.** On average, methane accounts for over one-half of oil and gas operational emissions. Climate risks can be immediately reduced 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, academic institutions, financial and industry actors, and NGOs. Numerous researchers, companies, governments, and public interest groups have been involved since the Oil Climate Index was first released in 2015 at the Carnegie Endowment for International Peace. RMI re-launched the updated OCI+ in 2022. 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.

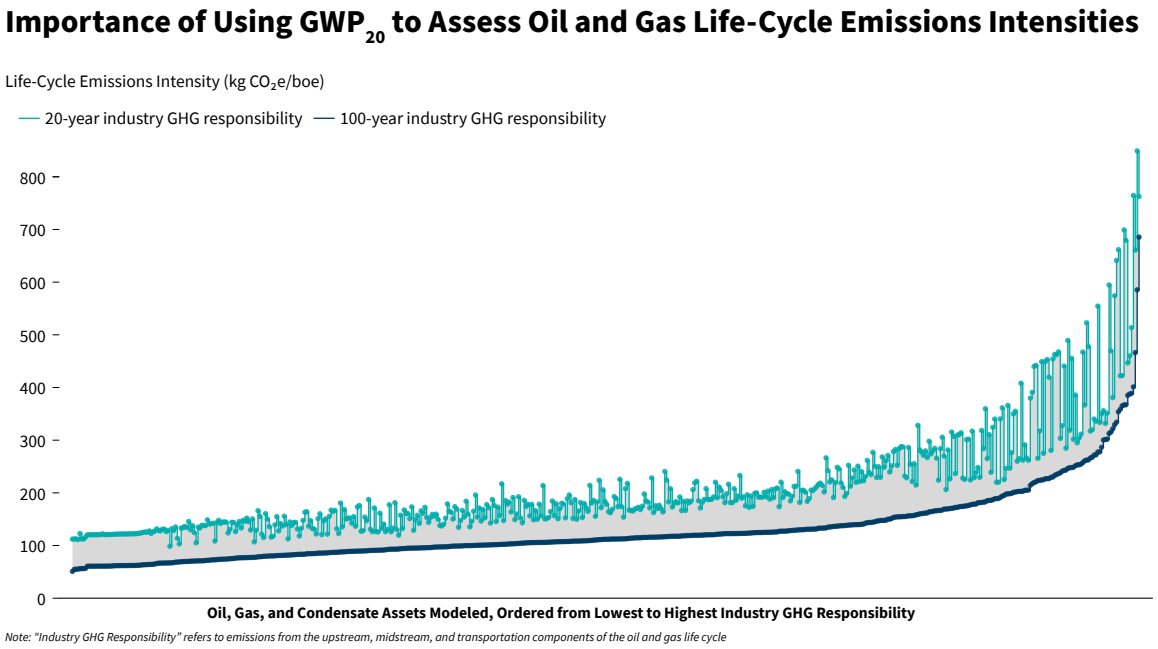


Image from Know Your Oil and Gas: Generating Climate Intelligence to Cut Petroleum Industry Emissions, RMI, 2022, https://rmi.org/insight/kyog/

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

Contact

Linda Jirouskova

ljirouskova@rmi.org

Additional Resources

OCIplus.RMI.org

RMI.org/insight/kyog

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