

Canada oil sands CO₂ emissions hugely underestimated: study

April 24 2019



Environment Canada scientists took atmospheric measurements and found oil sands CO₂ emission intensities up to 123 percent higher than current estimates

Canada's oil sands CO₂ emissions are significantly higher than indicated by industry data collected using internationally recommended methods,

according to a study published Tuesday.

Environment Canada scientists flying over the region took atmospheric measurements and found CO2 [emission](#) intensities up to 123 percent higher than current estimates.

Their findings were published in the journal *Nature Communications*.

"This leads to 64 percent higher annual GHG emissions from surface mining operations, and 30 percent higher overall oil sands GHG emissions (17 Mt) compared to that reported by industry, despite emissions reporting which uses the most up to date and recommended bottom-up approaches," said the study, referring to [greenhouse gases](#).

The current method of calculating emissions uses a combination of ground measurements based on fuel usage and mathematical modelling.

This includes emissions from mining, processing, upgrading and tailings ponds.

Because similar reporting methods are used across the entire oil and gas sector, the scientists concluded that all oil and gas CO2 emissions data "may be more uncertain than previously considered."

It also throws a wrench in the government's climate strategy.

Canada agreed under the Paris agreement to reduce its CO2 emissions by 30 percent by 2030, from to 2005 levels.

The vast oil region in northern Alberta contains the world's third-largest oil reserve and is the single largest polluter in the country.

Despite shedding jobs and struggling with low oil prices over the past

four years, the sector remains a top economic contributor.

More information: John Liggio et al. Measured Canadian oil sands CO₂ emissions are higher than estimates made using internationally recommended methods, *Nature Communications* (2019). [DOI: 10.1038/s41467-019-09714-9](https://doi.org/10.1038/s41467-019-09714-9)

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Citation: Canada oil sands CO₂ emissions hugely underestimated: study (2019, April 24)
retrieved 25 April 2024 from
<https://phys.org/news/2019-04-canada-oil-sands-co2-emissions.html>

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