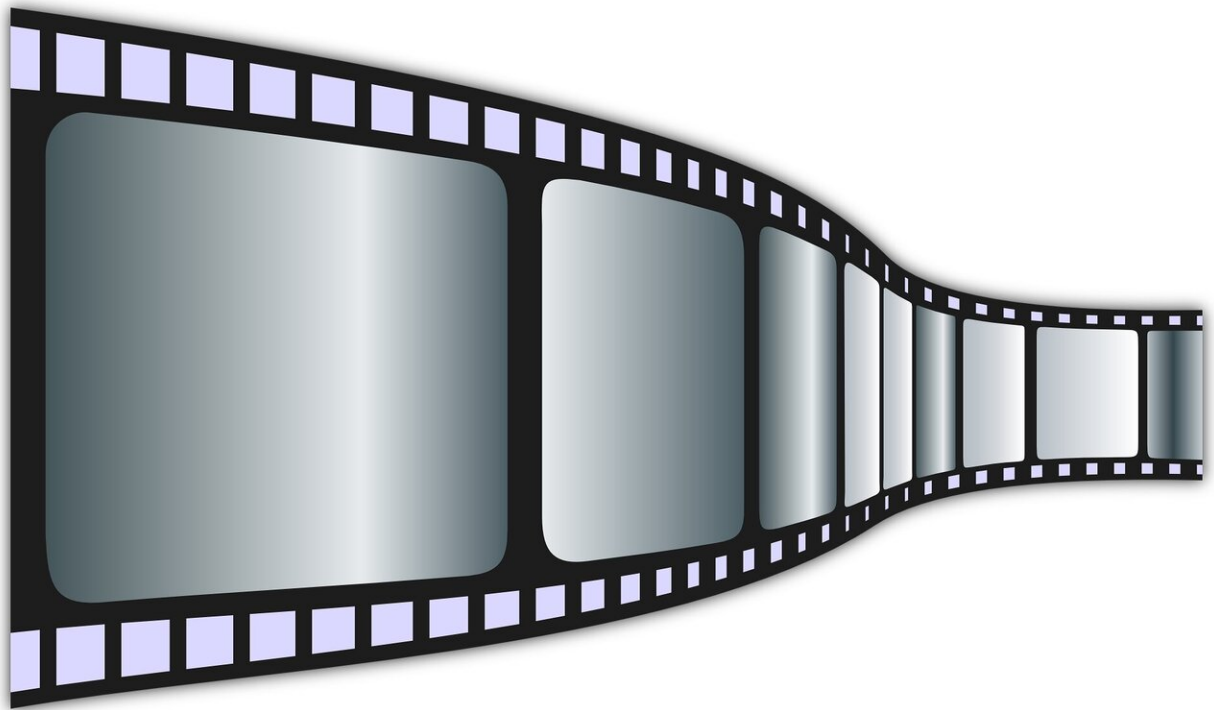


# The growing carbon footprint of streaming media

July 27 2021, by Tessa Perkins Deneault

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Credit: CC0 Public Domain

When was the last time you watched a DVD? If you're like most people, your DVD collection has been gathering dust as you stream movies and TV from a variety of on-demand services. But have you ever considered the impact of streaming video on the environment?

School for the Contemporary Arts professor Laura Marks and engineering professor Stephen Makonin, with engineering student Alejandro Rodriguez-Silva and media scholar Radek Przedpełski, worked together for over a year to investigate the carbon footprint of streaming media supported by a grant from the Social Sciences and Humanities Research Council of Canada.

"Stephen and Alejandro were there to give us a reality check and to increase our engineering literacy, and Radek and I brought the critical reading to it," says Marks. "It was really a beautiful meeting of critical media studies and engineering."

After combing through studies on Information and Communication Technologies (ICT) and making their own calculations, they confirmed that streaming media (including video on demand, YouTube, video embedded in social media and websites, video conferences, video calls and games) is responsible for more than one per cent of greenhouse gas emissions worldwide. And this number is only projected to rise as video conferencing and streaming proliferate.

"One per cent doesn't sound like a lot, but it's significant if you think that the airline industry is estimated to be 1.9 per cent," says Marks. "ICT's carbon footprint is growing fast, and I'm concerned that because we're all turning our energy to other obvious carbon polluters, like fossil fuels, cars, the airline industry, people are not going to pay attention to this silent, invisible carbon polluter."

One thing that Marks found surprising during their research is how politicized this topic is.

Their full report includes a section detailing the International Energy Association's attack on French think tank The Shift Project after they published a report on streaming media's carbon footprint in 2019. They

found that some ICT engineers state that the carbon footprint of streaming is not a concern because data centers and networks are very efficient, while others say the fast-rising footprint is a serious problem that needs to be addressed. Their report includes comparisons of the divergent figures in engineering studies in order to get a better understanding of the scope of this problem.

The top thing Marks and Makonin recommend to reduce streaming's carbon footprint is to ensure that our electricity comes from renewable sources. At an individual level, they offer a list of recommendations to reduce energy consumption and demand for new ICT infrastructure including: stream less, watch physical media including DVDs, decrease [video](#) resolution, use audio-only mode when possible, and keep your devices longer—since production of devices is very carbon-intensive.

Promoting small files and low resolution, Marks founded the Small File Media Festival, which will present its second annual program of 5-megabyte films Aug. 10 - 20. As the organizers say, movies don't have to be big to be binge-worthy.

**More information:** Full report: [www.sfu.ca/content/dam/sfu/sca...rbon-Footprint/SSHRC%20KSG%20final%20report.pdf](http://www.sfu.ca/content/dam/sfu/sca...rbon-Footprint/SSHRC%20KSG%20final%20report.pdf)

Small Media Film Festival: [smallfile.ca/](http://smallfile.ca/)

Provided by Simon Fraser University

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