



AS IT IS

Streaming Services and the Environment

September 14, 2020

A new study suggests that **streaming** services can lead to higher levels of greenhouse gas **emissions**. Researchers say the results depended, in part, on which technology was being used to send data.

The German government provided money for the study. Germany's Federal Environment agency published a report on the findings.

Many studies have linked "greenhouse gases," such as carbon dioxide, to rising temperatures in Earth's atmosphere. Greenhouse gases are a product of pollution from factories and other human activities.

Streaming services send videos, games, music and other material over the internet so that people can watch or listen to it immediately.

The researchers estimated the amount of carbon dioxide produced by data centers where material is stored for streaming. It also looked at the technology used to get the data to **consumers**.

The report found that streaming video over **fiber optic cables** results in the lowest amount of carbon dioxide, or CO₂ emissions — 2 grams per hour. Copper cables produced twice that amount. 3G mobile technology resulted in 90 grams of CO₂ emissions per hour.

The report said streaming over 5G, another wireless technology, would result in carbon dioxide emissions of 5 grams per hour.

Data centers were responsible for only a small amount of the energy used. But there were differences depending on how **servers** were used and cooled, the report noted.

Christian Stoll, an energy expert, was not involved in the study. He said the report's carbon dioxide estimates seemed reasonable. But he noted that the study did not consider how much electricity was taken by devices that were used to watch videos.

Stoll noted that such devices “represent a **significant** part of the total emissions.”

Presenting the report, German Environment Minister Svenja Schulze said the study tried to give data to decision-makers at a time when **digital** issues are important. The timing, Shulze added, is also important as countries try to reduce emissions of greenhouse gases.

“It is possible to stream data without negatively **impacting** the climate if you do it right...” she said. Schulze suggested that it might “be a good idea to set up more public WiFi hotspots, as this is more climate-friendly than streaming in mobile networks.”

I'm John Russell.

Frank Jordans reported on this story for the Associated Press. John Russell adapted it for VOA Learning English. George Grow was the editor.

Words in This Story

streaming – *adj.* a method of sending and receiving video and audio material online

emission – *n.* the act of producing or sending out something, such as energy or gas

consumer – *n.* a person who purchases goods and services for personal use

fiber optic – *n.* thin threads of glass or plastic that carry very large amounts of information in the form of light signals

cable – *n.* a group of wires or glass fibers, covered in plastic or rubber, and used to carry electricity or electrical signals

server – *n.* the main computer in a system which provides records and services that are used by the other computers

significant – *adj.* large enough to be noticed or have an effect; very important

digital – *adj.* relating to the use of computer technology

impact – *v.* to have a strong and often bad effect on something or someone
