

Fast-paced digitisation may not be good for environment

Every search by energy-consuming data centres leaves a carbon footprint

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Most of our days start with replying to messages on social messaging platforms and probably end with viewing videos on Netflix, but do we realise these activities contribute to climate change?

According to studies on climate change, data centres account for about 3 per cent of the total electricity consumed globally. Every search leaves a carbon footprint of 0.2 gm. Ten minutes of video streaming release 1 gm of carbon dioxide.

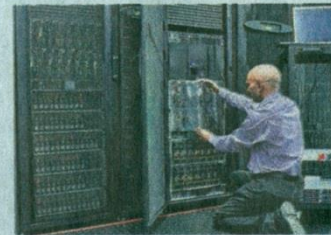
Data centres

Data centres are networked computer servers used by large organisations for storage, processing and distribution of data. When you search in Google or stream a video, data is fetched from these

servers that consume energy. This is worrying scientists and should ideally worry governments and businesses across the globe, considering the pace at which the data centre market is growing.

According to a market report by Cushman and Wakefield, data centre market revenue is about \$170 billion, dominated by the Americas. India will be a \$4.5-billion data centre market by 2018 and \$7 billion by 2020, driven by investments in the digital infrastructure space from both Indian and global tech companies to cater to the growing digital economy that is projected to reach \$1 trillion by 2025.

This is evident from the investment many companies are making in data centres in India, aided by the government's policy on data local-



Data centres consume about 3 per cent of the total electricity consumed globally

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isation. Recently, global players such as Alibaba and WhatsApp launched data centres in India and there are more in the pipeline.

But people in the industry say, there is no way data centre growth can be slowed down when internet-based services are driving the market.

Ulka Kelkar, Director Climate Policy, WRI India, a research organisation, said, "The only solution is switching to clean energy and using energy more efficiently." For

instance, Google has put in place energy efficient mechanisms to keep Power Usage Effectiveness (PUE) in the range of 1.12. The technology major also buys renewable energy to offset the fossil fuel usage. While PUE of 1 is ideal, 1.12 is as close as you can get.

Renewable push

BS Rao, Vice-President, Marketing, CtrlS Datacenters, said, "We have brought our PUE from over 2 to 1.4, which is efficient." In addition the company is investing heavily in renewable energy. Sridhar Pinnapureddy, founder and CEO, said the company is coming up with hyper-scale data centres that will run on solar power.

Kelkar explained that even with energy efficient measures, unless a complete shift to clean energy happens, there is no solution. The market for clean energy is still growing and hence there is not enough capacity.