

EN

P-001000/2020

Answer given by Mr. Breton  
on behalf of the European Commission  
(12.5.2020)

Climate change is one of the greatest challenges society has ever faced. The European Commission has made tackling it a strategic priority with the European Green Deal. Artificial Intelligence (AI) can be a powerful tool in this effort, if its carbon footprint is addressed.

To guide its policy initiatives, the Commission draws on different studies covering AI and its impact on society, including the environmental consequences and opportunities. The 2018 Joint Research Centre study “Artificial Intelligence / A European Perspective” estimates that data centres and data transmission could account for 3-4% of all EU power consumption. It recommends pushing computing and data to the edge of the network and identifies certain areas of actions, including reducing the energy consumption of data centres, the embodied energy and obsolescence of digital technology. The academic paper “Energy and Policy Considerations for Deep Learning in NLP (Natural language processing)” by Emma Strubell, Ananya Ganesh and Andrew McCallum from the University of Massachusetts Amherst showed vast differences in CO2 emissions of different deep neural networks and argues computationally efficient hardware and algorithms should be prioritised.

On 19 February 2020, the European Commission presented its digital strategy with several measures to tackle the environmental challenge and reap the opportunities of AI, including initiatives for circular electronics, climate-neutral data centres as well as digital-twin based environmental prediction and crisis management capabilities. The White Paper on AI also proposes a low-power processors initiative, including additional funding, and stresses the need to ensure environmentally optimal outcomes in its proposed regulatory framework for AI.