

(English version)

**Question for written answer E-001977/24
to the Commission
Nicolás González Casares (S&D)
(8 October 2024)**

Subject: AI and energy consumption

The EU is a pioneer in regulating artificial intelligence. However, although the legislation itself warns of the energy required by this technology, it does not include provisions on this aspect of its development. AI requires significant quantities of energy to function and the International Energy Agency estimates that the total demand from the use of artificial intelligence and data centres could double between 2022 and 2026. Big companies with investments in AI are trying to buy zero-emission electricity at above-market rates to obtain decarbonised electricity.

In view of this:

1. Has the Commission carried out any evaluations of the development of electricity use, and specifically of zero-emission electricity, in AI technology and its effects on climate goals, or of energy efficiency and of renewables in the EU?
2. In light of the fact that this unchecked development could put the provision of zero-emission electricity to citizens and other industries at risk, what steps will the Commission take to tackle this issue?

Submitted: 8.10.2024

**Answer given by Ms Simson on behalf of the European Commission
(19 November 2024)**

The Commission is addressing the concern over the increased footprint of Artificial Intelligence (AI) in Europe's energy system through various initiatives, some of which are mentioned below.

The EU has set, since 2019, ecodesign requirements for servers and data storage products (currently under review) and adopted, in 2024, new rules to monitor the energy performance of data centres by collecting and publishing data, including on the energy, renewable energy, and water footprint of data centres.

At the same time, the recast Energy Efficiency Directive ⁽¹⁾ put in place new planning and assessment rules with a view to encouraging new data centres to be located where waste heat can be reused, and energy and water needs for cooling can be reduced.

The Renewable Energy Directive ⁽²⁾ helps increase the supply of renewable electricity, in particular through faster permit-granting procedures.

The recently adopted AI Act ⁽³⁾ envisages an obligation for providers of General-Purpose AI models to document the known or estimated energy consumption of the models and encourages voluntary codes of conduct, which could comprise environmental sustainability, including as regards energy-efficient programming and techniques for efficient design, training, and use of AI.

Finally, in 2024 the Commission awarded an external study with objectives to explore the current and expected environmental impact of AI and to develop and operationalise a concept for a potential green AI label.

It also has invested, through Horizon Europe ⁽⁴⁾, in the research for energy-efficient AI technologies, as exemplified by projects like SustainML ⁽⁵⁾, dAIEDGE ⁽⁶⁾ and ELIAS ⁽⁷⁾.

⁽¹⁾ Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency and amending Regulation (EU) 2023/955 (recast); <http://data.europa.eu/eli/dir/2023/1791/oj>

⁽²⁾ Directive (EU) 2023/2413 of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652; <http://data.europa.eu/eli/dir/2023/2413/oj>

⁽³⁾ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 laying down harmonised rules on artificial intelligence and amending Regulations (EC) No 300/2008, (EU) No 167/2013, (EU) No 168/2013, (EU) 2018/858, (EU) 2018/1139 and (EU) 2019/2144 and Directives 2014/90/EU, (EU) 2016/797 and (EU) 2020/1828 (Artificial Intelligence Act); <http://data.europa.eu/eli/reg/2024/1689/oj>

⁽⁴⁾ https://research-and-innovation.ec.europa.eu/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe_en

⁽⁵⁾ <https://cordis.europa.eu/project/id/101070408>

⁽⁶⁾ <https://cordis.europa.eu/project/id/101120726>

⁽⁷⁾ <https://cordis.europa.eu/project/id/101120237>