Blockchain applications: an energy perspective

Date and time: 12th April 2022, 14h00 CEST (Paris time)

Background information

A blockchain is a public digital ledger which can be used to verify the ownership of both real-world and digital assets such as cryptocurrencies. However, many blockchains, and in particular some cryptocurrencies, use a validation mechanism known as 'proof-of-work'. This mechanism requires vast computing power and results in substantial electricity consumption. For Bitcoin alone, more than 100 TWh per year is now consumed, which is equivalent to the annual electricity consumption of the Netherlands.

The event

The IEA's Digital Demand-Driven Electricity Networks (3DEN) Initiative and IEA - 4E TCP Electronic Devices and Networks Annex (EDNA) are co-organising this webinar illustrate how blockchains work, how cryptocurrencies and other applications employ the blockchain, and why the resulting energy consumption is so high. A potential solution to significantly reduce the energy consumption used for validation will also be presented.

The webinar will draw from the key findings of the report Blockchain Energy Consumption - An Exploratory Study. The report was commissioned by the Swiss Federal Office of Energy and authored by Mr Vlad Coroama, Independent researcher, Roegen Centre for Sustainability (formerly at ETH Zürich). The report contains a detailed analysis of blockchain, its use in cryptocurrencies and beyond, and the resulting energy consumption.

Based on the Swiss report, the IEA - 4E Electronic Devices and Networks Annex (EDNA) has published a policy brief on this topic, aimed at policy makers.

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Agenda

14h00	**Welcome and opening remarks** • **Vida Rozite,** 3DEN Project Manager, Energy Efficiency Division, International Energy Agency • **Roland Brüniger**, 4E EDNA delegate for Switzerland, Swiss Federal Office of Energy
14h10	**Presentation of the main findings from the report "Blockchain Energy Consumption - An Exploratory Study"** • **Vlad Coroama,** Independent researcher, Roegen Centre for Sustainability
14h30	**Discussion and Q&A** Moderated by **George Kamiya**, Digital and Energy Analyst, International Energy Agency • **Vlad Coroama,** Independent researcher, Roegen Centre for Sustainability
14h55	**Closing** • **Vida Rozite,** 3DEN Project Manager, • Energy Efficiency Division, International Energy Agency
15h00	**End of webinar**

Registration - Please register here.