

HOW DANGEROUS ARE BITCOIN EMISSIONS FOR GLOBAL CLIMATE?

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3:00 to 5:00 pm
ESI Conference Room
29 Heng Mui Keng Terrace
Block A, #10-01, Singapore 119620**

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Abstract

With the advancement of decentralized renewable energy production and increased competition, the energy industry is putting high hopes on innovations which hold the potential to reduce the cost in the industry. One of the innovations with such a potential is considered to be the blockchain technology. The most prominent and first ever blockchain application is the cryptocurrency Bitcoin. However, last year, media outlets such as Forbes or the Washington Post warned about Bitcoin's climate footprint following a study published in Nature Climate Change. The media's attention and subsequent warnings were certainly appropriate as the authors of the study, Mora et al., came to the conclusion that Bitcoin emissions alone could render all efforts of the Paris agreement ineffective as Bitcoin emissions alone could push global warming over the 2° C threshold within the next two decades. Mora et al. identified the decentralized proof of work mechanism of Bitcoin's blockchain as the reason for the cryptocurrency's emission. This would certainly be a rather gloomy outlook for the energy industry with its high hopes for the blockchain technology should the analyses of the study be accurate.

In this seminar, the question will be elaborated on how dangerous Bitcoin and the blockchain technology is for the global climate. For this, the mechanisms behind Bitcoin and blockchain technologies will be presented. Furthermore, the seminar will emphasize on methods to estimate current and future energy consumption and greenhouse gas emissions of Bitcoin mining. Eventually, the hypothesis that Bitcoin emissions alone can push global warming over 2°C will be re-evaluated.

About the Speaker

Professor Aaron Praktiknjo is Assistant Professor for Energy Resources and Innovation Economics at the E.ON Energy Research Center at RWTH Aachen University in Germany. His research group focuses on the interaction between energy markets and energy technologies. Prof. Praktiknjo holds a PhD in energy system analysis from TU Berlin for which he has received awards from the International Association for Energy Economics (IAEE) and the European Energy Exchange (EEX) amongst others. He is President of the GEE, the German affiliate of the IAEE, Representative of the European affiliates in the IAEE council and spokesperson of the Research Network Energy System Analysis of the German Federal Ministry for Economic Affairs and Energy. Together with Prof. Peter Zweifel and Prof. Georg Erdmann, he co-authored the textbook 'Energy Economics - Theory and Application'.