## Initiative on bitcoin/proof of work meeting

03 February 2022 14:30 - 16:00

Participants:

- \*\*\* (DE, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety)
- \*\*\* (SE, SWEDISH ENVIRONMENTAL PROTECTION AGENCY)
- \*\*\* (SE, Financial supervisory authority)
- \*\*\* (SE, Sweden energy agency)
- \*\*\* (DG ENER);
- \*\*\* (DG CNECT);

Both Swedish and German authorities expressed concerns about energy usage related to crypto mining as climate transition challenges raised a number of worries around that. Looking for cooperation and knowledge at EU and international level.

The Cambridge mining map (<a href="https://ccaf.io/cbeci/mining">https://ccaf.io/cbeci/mining</a> map) suggests that Europe represents ~10% of total mining (mainly Ireland and Germany); with a strong caveat for both countries mentioning "there is little evidence of large mining operations in Germany/Ireland that would justify this figure. Germany's/Ireland's share is likely significantly inflated due to redirected IP addresses via the use of VPN or proxy services"

Figure is about 1TWh for Sweden, which is 0.7% of the energy used. VPN and proxy services hide the exact number.

The eco-design framework applies to products and is not suitable for services. Eco-design was particularly relevant for products but bitcoin mining is a service. In addition, bitcoin miners have the ability to relocate very quickly, as the episode of the ban in China demonstrated so direct environmental impact of a ban would likely be small or null.

Discussion on the goal of creating a fossil free society according to the Paris agreements. Many societal changes are required and industries need to be transformed. They will all need to electrify. Limited supply of electric power.

Dialogue with financial authority. If the problem is growing, it is worth to look at other possibility with combination of instruments, connected to financial transactions.

Ethereum is planning to migrate to POS. But the process is quite complex and takes years, so it is not a short-term solution.

How plausible is the narrative that miners can be a baseload consumer and use the energy that would otherwise be unused or wasted?

Excess energy can be diverted to other markets. Methods of storing energy will improve. Hydrogen production can take excess energy. There is no excess energy.

Miners want to be connected all the time. It is not in their interest to be intermittent user, as the machines are not earning anything when switched off. In Texas, energy company is compensating miners for the time when they need to be switched off.

Energy efficiency directive is currently in discussion with MS and the Council. Work on data centres ongoing. Registry will bring a major change. It could be first step in having some energy labelling that could be applied to data centres.

Participants agreed that more research is needed.

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