

The Rt. Hon. Jeremy Hunt MP,  
Chancellor of the Exchequer

C/o Correspondence and Enquiry Unit,  
HM Treasury  
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Subject: Nuclear energy has counter-productive effects to climate policy

Dear Chancellor,

I am writing to you as the chairman of Cities for Nuclear Free Europe (CNFE). CNFE is a network of cities - some of them capitals or regional capitals - and big local authorities in Europe, who are committed to a new fossil-free, nuclear-free future. With 33 member cities, we are representing a total number of more than 14 million inhabitants.

We have learned that it is the intention of the UK Government to declare investments in nuclear energy to be 'green' as a supposed 'environmentally sustainable economic activity' as part of the UK's revised taxonomy.

We as the Cities for Nuclear Free Europe think that nuclear power, just like fossil fuels, cannot contribute to a resilient and sustainable climate policy.

**Research has shown that funding nuclear energy is even delaying an effective climate policy.**

In October 2020, the University of Sussex has published a study, which can be summarized as follows:

If countries want to lower emissions as substantially, rapidly and cost-effectively as possible, they should prioritize support for renewables, rather than nuclear power.

This is the finding of an analysis of 123 countries over 25 years by the University of Sussex Business School and the ISM International School of Management. The adoption of nuclear power did not achieve the significant reduction in national carbon emissions that renewables did – and in some developing nations, nuclear programs actually pushed carbon emissions higher. The study also finds that nuclear power and renewable power do not mix well, when they applied together: they tend to crowd out each other, because they need different infrastructure.

Using nuclear as a temporary solution risks setting nations on a path of higher emissions than if they went straight to renewables. The study authors propose that by cutting out nuclear altogether, these renewable gains could be even greater. In certain large country samples, the relationship between renewable electricity and CO<sub>2</sub>-emissions is up to seven times stronger than the corresponding relationship for nuclear<sup>1</sup>.

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<sup>1</sup> Vowles, N., 5 October 2020: "Two's a crowd: Nuclear and renewables don't mix. Only the latter can deliver truly low carbon energy says new study" – Sussex, <https://www.sussex.ac.uk/news/research?id=53376>

### **Nuclear power is by no means carbon neutral.**

Regarding the carbon footprint nuclear energy shows no pertinent advantages compared to renewable sources today. With inevitable lower uranium ore grades in the future the relation is going to shift further to the disadvantage of nuclear energy in the years to come.

The City of Vienna conducted a comparison of the scientific literature available on the carbon footprint of nuclear energy accompanied by a calculation of the Austrian Energy Agency (AEA). The results of the project are available in German language on the webpage of the AEA<sup>2</sup>.

In addition, the University of Natural Resources and Life Sciences, Vienna published a study, which came to a similar conclusion. It is stated that currently nuclear power only avoids 2-3 percent of total global GHG emissions per year. Given the foreseeable shortages on easy accessible Uranium-235 sources and the extensive time necessary for new build projects (currently 15-20 years in Europe), Nuclear power's contribution to climate change mitigation is and will be very limited. The study was published in the scientific journal "Energy Policy"<sup>3</sup>.

### **Climate emergency**

Spending resources on new nuclear, which is unlikely to be built in time and to the amount required in order to have a significant positive impact on climate change, is not an effective use of public money.

All reasons mentioned are based on numerous scientific research, which CNFE would be happy to supply if needed.

Considering all these aspects, on behalf of the members of our network I appeal to you to support the pathway leading to an innovative sustainable climate friendly future and that you continue to exclude nuclear from classification as a 'green' investment under the revised taxonomy rules.

Yours sincerely,



Jürgen Czernohorszky,  
Chairman Cities for Nuclear Free Europe  
Executive City Councillor for Climate, Environment, Democracy and Personnel of Vienna  
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Please send your reply to:

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<sup>2</sup> Wallner, A., A. Wenisch, M. Baumann, S. Renner, 2011: „Energiebilanz der Nuklearindustrie. Analyse von Energiebilanz und CO<sub>2</sub>-Emissionen der Nuklearindustrie über den Lebenszyklus. Zusammenfassung“ – Wien, <https://wua-wien.at/images/stories/publikationen/studie-energiebilanz-nuklearindustrie-kurzfassung.pdf>

<sup>3</sup> Muellner, N., N. Arnold, K. Gufler, et.al., 2021: "Nuclear energy - The solution to climate change?" Energy Policy, Volume 155, 112363, ISSN 0301-4215, <https://doi.org/10.1016/j.enpol.2021.112363>.