To:

Mr Valdis Dombrovskis (Executive Vice President, European Commission),

Frans Timmermans (Executive Vice President, European Commission),

Mrs Kadri Simson (Commissioner, DG ENERGY)

Dear Vice-President of the European Commission,

Dear Commissioner,

We are group of scientists representing academia and civil society and strongly support the goal to achieve climate neutrality by 2050. Climate change is one of the biggest challenges faced by the world today and we are convinced that leaving a better planet to those coming after us should be our legacy. If we do not act now, we will very likely face many more challenges in the future including pandemics, natural disasters, migration waves and irreversible changes to the environment creating huge costs both for the global economy and human society. That is why we have welcomed and embraced both the Long-Term Strategy (Clean Planet for All) published in 2018 and the European Green Deal, published at the end of last year.

We welcome the initiatives and instruments that are proposed for the Financial Sector to enable the Green Transition

Although the sustainable transition should be considered a top political priority, we realize it comes at a significant economic cost. Therefore, we strongly support the Sustainable Finance Action Plan which should ensure that finance flows into projects support both economic and climate change ambitions (preserving our planet for the future generations). The Taxonomy Regulation, once implemented, should provide investors with reliable information on which activities and technologies contribute to the sustainability goals. It will be a crucial tool for investors to guide finance in the right direction and as such, needs to be carefully and thoughtfully designed.

Energy Sector Faces Major Transformation

The energy sector still contributes the largest share of total greenhouse gas emissions (28.2 % in 2017 based on Eurostat data). To achieve climate neutrality, the sector will inevitably have to undergo the biggest transformation. We fully agree with the conclusions of the communication “Clean Planet for All”, which acknowledges that nuclear power together with renewables will form the backbone of a carbon-free European power system. Both can provide European industries and households with low-carbon and pollution free energy. In other words, technologies that can make the energy transition possible already exist and are operating today.

Nuclear Should Be an Element of Stability in the Climate Neutral Europe

To fight climate change and limit the global temperature increase (ideally) below 1.5 °C, we must act now. Many European countries have decided to phase-out fossil fuels as soon as possible and others are currently developing strategies to join them. Electrification will probably be the key enabler of the clean energy transition and will create a growing demand for electricity. This will be the case, even with wide application of the “Energy Efficiency First

Principle" that will offset some of the increased demand. The EU must be supplied with enough generation capacity to match the demand for clean, affordable and reliable power.

Even though developing rapidly, renewables will not be able to provide the required generation adequacy. Also, a power system built solely on renewables, demand side solutions, and flexibility, would create significant system stability issues. In addition, it would require major restructuring and new build of power grids across the EU.

Therefore, we call on the European Commission and all EU policymakers to adopt the pathway set by the "Clean Planet for All" long term strategy (and the IPCC) and build the decarbonized energy system with renewables and nuclear power "providing the backbone". Nuclear provides low-carbon, zero pollution and reliable power to help meet the needs of European citizens and industries. However, to be able to do so efficiently, effectively and at least cost to consumers, like renewables it also needs a predictable policy framework that sends clear signals to investors on the future role of nuclear, as an important part of the solution in the fight against climate change

We Call for an Evidence-based Assessment of Nuclear within the EU Taxonomy

The EU Technical Expert Group (TEG) on Taxonomy concluded that there is a clear evidence that nuclear substantially contributes to climate mitigation. Nevertheless, the TEG also concluded that at this point *"the evidence about nuclear energy is complex and more difficult to evaluate in a taxonomy context"* regarding the potential significant harm to other environmental objectives. It recommended that more extensive technical work be undertaken.

The debate around nuclear energy is often political. It is therefore essential that the assessment of the Do No Significant Harm (DNSH) issue for nuclear remains strictly technical, evidence-based and is conducted by qualified experts. It must not be conducted by those with political or ideological agendas.

Some anti-nuclear groups are already calling for the exclusion of nuclear from the list of sustainable activities under the Taxonomy. It is clear that most of the arguments being put forward are not based upon scientific evidence, Therefore, as scientists and researchers, we feel the need to clarify some of the statements used to discredit the nuclear sector:

- Nuclear currently provides more than 47 % of the low-carbon electricity generation in the EU. **Without nuclear, there will be half a billion tonnes of extra CO_2 emissions every year in Europe, which is more than the emissions of the UK or France alone;**
- **life cycle emissions produced by nuclear compare favourably with those from renewables technologies.** According to the Intergovernmental Panel on Climate Change (IPCC) figures, with 12g of CO_2/KWh, nuclear life-cycle emissions are equal to those of wind power and are four times lower than solar power. The IPCC analysis for nuclear includes the whole life cycle, including uranium mining, enrichment and fuel fabrication, plant construction, use, decommissioning and long-term waste management;

- **an analysis of recognised levelized cost of energy (LCOE) figures, clearly shows that nuclear energy is competitive with other low-carbon power sources**.. Again, based on the IPCC figures, the LCOE of nuclear is on average half of solar or offshore wind and comparable to onshore wind;

- moreover, the calculations do not consider the value of stable, reliable power supply. Nuclear power generation doesn´t rely on weather conditions and provides reliable power to industry, transport, hospitals, homes and businesses 24 hours a day/365 days a year. The current covid-19 crisis has provided clear evidence that it is in the time of a crisis when scarcity defines value. **Ensuring reliable power should always remain an imperative during policymaking;**

- **with a strong, positive regulatory framework in place, there is huge potential to decrease build time and cost of new nuclear projects.** Recent projects on modernization and harmonization of nuclear supply chain have shown that streamlined requirements on vendors, combined with the benefits of series build, can rapidly increase the speed of new-builds while decreasing costs and maintaining safety;

- **nuclear can be flexible and does not undermine deployment of renewables.** Recent findings by the Massachusetts Institute of Technology (MIT) have shown that operating nuclear plants flexibly can reduce overall electricity costs and cut carbon emissions in electric power systems. Developing and releasing the potential of the Small Modular Reactors (SMRs) can also contribute to making nuclear reactors more scalable and potentially decreasing costs and build time requirements;

- **flexible nuclear operation can help add more wind and solar to the grid**. Nuclear and renewables should be partners in fighting climate change and it is sad that some anti-nuclear activists are building barriers and support the narrative of nuclear power undermining the deployment of renewables. The time for action to fight climate change is very tight and all low-carbon and clean technologies that can contribute to the fight against climate change must be allowed to contribute and be part of the solution;

- **nuclear power plants are protected against rising sea levels and flooding.** The International Atomic Energy Agency (IAEA) global safety standards require operators to take account of risks arising from rising sea levels. It is also important that even in the worst case scenarios modelled by the IPCC, if sea levels rise one metre by 2100, the current nuclear fleet will be already decommissioned, and the new-build power plants can easily be adapted to any potential challenges when being designed and built;

- **both IAEA and EU regulatory framework ensure that nuclear power plants comply with the highest safety standards**. The framework applies to the full nuclear life-cycle including the management of nuclear waste and ensures that nuclear waste is safely managed in the long-term. Interim storage solutions that are fully operational worldwide are licensed by competent authorities, comply with the highest safety regimes, are developed in a transparent manner and undergo strict environmental impact assessments;

- at the same time, the **nuclear industry in cooperation with regulators identify and, in some cases, already commence of deliver facilities to safely dispose nuclear waste in the long term**. The European Commission has recently acknowledged that Finland, France and Sweden are advancing their solutions for long term storage of high-level waste.

Nuclear power is an important and established power source for European citizens and industries and is crucial for the stability of energy systems. The existing strict regulatory regime define the "Do No Significant Harm" principle for nuclear sector and guarantees that nuclear power plants are operated in a safe and sustainable manner, including their decommissioning and spent fuel management.

International bodies including the Intergovernmental Panel on Climate Change and the International Energy Agency acknowledge the role of nuclear in the fight against climate change and their analysis and conclusions provide compelling evidence that nuclear power is safe, competitive and sustainable. Also, the European Commission itself has recognized that nuclear power, together with renewables, should be the backbone of the climate neutral energy system.

For the reasons mentioned above, we call on the Commission to follow-up on the TEG Report and enable a "just" expert assessment of nuclear power with regard to the DNSH criteria. This assessment must be based on scientific evidence and should not be influenced by any political or ideological agenda. Fighting climate change is a matter of the highest urgency, all low-carbon energy sources must be allowed to contribute, and the final Taxonomy on Sustainable Finance must respect these points.

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Třebíč Energetic Region

Ekoregion 5

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